

**Library**

**University of Pittsburgh**

*Darlington Memorial Library*

**Class** .....

**Book** .....













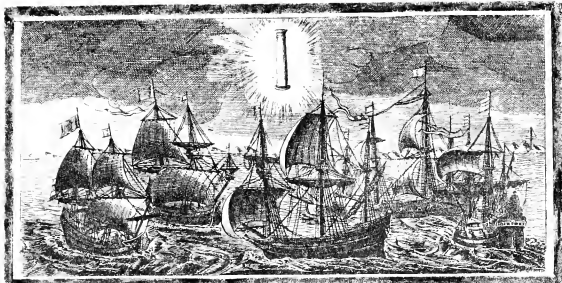












# HISTORICAL AND GEOGRAPHICAL NOTES

1453-1530



By HENRY STEVENS GMB FSA MA Yale etc  
Fellow of the Royal Geog & Zoological Societies of London  
Foreign Member of the Amer Antiq Society Corresp Member  
of the Historical Societies of Mass New York Connecticut  
Maine Vermont New Jersey Pennsylvania Wisconsin  
and Blk Eld Athm Clb Lond

NEW HAVEN: Office of the American Journal of Science  
LONDON: Office of the Author No 4 Trafalgar Square 1869



Congress of Badajos.



# HISTORICAL AND GEOGRAPHICAL NOTES

## ON THE EARLIEST DISCOVERIES IN AMERICA

1453—1530

WITH COMMENTS ON THE EARLIEST CHARTS AND MAPS; THE MIS-  
TAKES OF THE EARLY NAVIGATORS & THE BLUNDERS OF THE  
GEOGRAPHERS; THE ASIATIC ORIGIN OF THE ATLANTIC  
COAST LINE OF NORTH AMERICA HOW  
IT CREPT IN AND HOW IT  
CREPT OUT OF  
THE MAPS  
THE  
WHOLE  
ILLUSTRATED BY THE  
TEHUANTEPEC RAILWAY COMPANY'S  
MAP OF THE WORLD ON MERCATOR'S PRO-  
JECTION AND PHOTO-LITHOGRAPHIC FAC-SIMILES  
OF MANY OF THE EARLIEST MAPS AND CHARTS OF AMERICA

By HENRY STEVENS GMB MA etc

<sup>111</sup>  
SOMETIMES STUDENT IN YALE COLLEGE IN CONNECTICUT  
NOW RESIDENT IN LONDON

NEW HAVEN: OFFICE OF THE AMERICAN JOURNAL OF SCIENCE  
LONDON: HENRY STEVENS 4 TRAFALGAR SQUARE

1869

100  
E 101  
824

Entered according to Act of Congress in the year 1869 by  
HENRY STEVENS  
in the Clerk's Office of the District Court of the District of Connecticut

A few copies printed for presents—N<sup>o</sup>  
Seventy-five copies printed for sale—N<sup>o</sup>

TUTTLE, MOREHOUSE & TAYLOR, PRINTERS,  
221 State St, New Haven, Conn.



TO

JAMES LENOX

WHOSE CONSTANT CORRESPONDENCE FOR MORE THAN TWENTY  
YEARS RESPECTING THE BIBLIOGRAPHY OF THE EAST  
AS WELL AS THE WEST HAS ENCOURAGED  
THE WRITER AND STIMULATED  
HIS INVESTIGATIONS  
THESE PAGES  
ARE  
GRATEFULLY AND CORDIALLY INSCRIBED



## EXPLANATORY

Notwithstanding the assiduity of his researches and the pains he has taken to extricate facts from the confusion of different authors, as what is true does not always appear possible, and what appears possible is not always true, he has not entirely succeeded, though he has done all that could be expected.—*Cullen on Clarigero.*

IN February last the writer was asked by his brother, Mr. Simon Stevens of New York, President of the Tehuantepec Railway Company, to contribute to his forthcoming book on Tehuantepec, an Historical Introduction on the earliest discoveries in America, and on the routes of commerce of the Old World, tracing their changes, especially so far as they had any direct bearing on his project of Interoceanic Communication by way of the Isthmus of Tehuantepec. The writer accepted the opportunity, not expecting perhaps so much to aid the enterprise as to give shape and expression to certain ideas that had for years been floating and growing in his mind respecting the entanglement, in our earliest charts, of the northeast coast lines of Asia and North America, and the confusion growing out of it, in the early history, geography, and chronology of the new Continent. In reprinting that paper here, with considerable revision and emendation, necessary to harmonize it, he finds it convenient to throw the chief additional matter into an explanatory preface, rather than rewrite the whole.

Recently vast stores of material of American history have been brought to light. Old books and maps have turned up. Bibliography has become an exact science. Documents are scrutinized anew, as they never were before. New historical books have been written, old ones revived, annotated, edited and reproduced, to such an extent that half an American historian's labor, before he begins his narrative, consists in clearing away the rubbish of his predecessors, and in reconciling conflicting authorities. There is something manifestly wrong in this, for the honest Muse of History is not such a muddler. Truth is not so obscured in the other coast lines of this hemisphere.

In 1793 appeared the first volume of Muñios' great work. The death of the author prevented its continuation. His manuscripts and his mantle fell to Señor Navarrete, who published in 1825 his first two volumes on the voyages of Columbus, though the learned compiler had been diligently at work in official and private archives since 1789, under the patronage of the Spanish government. Then followed in quick succession, in 1828, a translation into French of Navarrete's volumes, with additions by prominent members of the Geographical Society of Paris. The same year Washington Irving gave to the world his *Life of Columbus*, built confessedly upon Navarrete's foundation. The year 1830 brought forth in London *The History of Maritime Discovery*, followed and cut to pieces the next year by Biddle's *Memoir of Sebastian Cabot*, which in turn was roughly handled in 1832 in Tytler's *Historical View of the Northern Coasts of America*. Finally in 1835-1839, after long and gigantic research, appeared Humboldt's *Examen Critique*, a digest of all that had preceded it respecting the causes that led to the discovery of the New World; the facts and dates of the voyages of Columbus, the Cabots, Vespucci, and others; the earliest maps and charts, etc.

This incomparable work was a masterly survey of the whole field of early American geography, and though unfinished has been the parent of innumerable minor productions. The large marine chart of the World by Juan de la Cosa, discovered by Humboldt in 1832, was here used for the first time, and was in many respects the great philosopher's grand card. More re-

cently the labors of Kuntsmann in Munich, of Santarem and Jomard in Paris, of Ghillany in Nuremberg, of Rawdon Brown in Venice, of Bergenroth in Spain, have brought to light valuable original material illustrative of maritime discovery prior to 1492, as well as of the voyages of Columbus, Vespucci, the Cabots, Behaim, and others. Still more recently many subjects of great interest and importance pertaining to our earliest geography have been elaborated by Messrs. LaSagra, Lelewel, D'Avezac, Varnhagen, Major, Peschel, Bancroft, Helps, Parkman, B. Smith, Murphy, Lenox, Asher, Hale, Read, Deane, and not least by Brevoort, until one is ready to exclaim of the old voyagers, Are their ways past finding out? Yet there still exists the old entanglement in the American and Asiatic coast lines and the old confusion in our primitive annals and geography.

A new summing up of North American discovery has appeared in a magnum opus published in April of this year by the Maine Historical Society, nominally the History of the Discovery of Maine, but really the history of the discovery of the whole eastern coast of North America. This learned work by John G. Kohl, LL.D. is presumed to be the culmination of all that is known and recorded on this vast subject from Adam of Bremen to Kohl of Bremen, and may therefore be held as the present state of the history of North American geography and discovery.

There is appended to the Maine volume a remarkable paper on the *four* voyages of John and Sebastian Cabot, by M. D'Avezac of Paris, in which the distinguished French geographer, on several important points, expresses views precisely opposite to those of Dr. Kohl. Both of course cannot be right, but this affords an apt illustration of the present confused condition of our geography. However, whether in all respects the Maine volume will stand the test of criticism or not, the Historical Society of Maine is deserving of high commendation for having so boldly and so honestly put forth this expensive foreign production, amply illustrated as it is with facsimiles (ut vulgo) of no less than twenty-three of the earliest maps. The whole question is now brought down to date and set up between two boards for public view and judgment. No geographer has as yet done the work better, and the only wonder is that Dr.

Kohl could have done so much and so well, even from his point of view, in the short time allowed him. But—

Still the writer does not find his cravings for true and exact history satisfied. The words may, perhaps, and probably, are the menials of Fiction, seldom of History. Another method of treating our ancient records, he has thought, might possibly throw new light on the old geographical puzzles that have come down to us from and before the Great Discoverer, and reveal the key. The truth is that the history of the early voyages is so bemuddled by recent writers (and the newly discovered old materials seem only to add to the confusion) that nothing short of an entire overhauling of first principles, and resifting of facts, aided by rigid chronology and compound scrutiny, will enable us to take clear observations, to ascertain our bearings and show us whither we have drifted these four hundred years. The writer does not pretend that he is competent to do this himself, though he owns to the consumption of no little midnight petroleum in trying to read old records by the new light. He has attempted, after many years of bibliographical study, to step into the shoes of the old navigators, pilots and cosmographers, to see as they saw, beginning fifty years before, and coming down to half a century after Columbus, taking up the sequence of events as they occurred, and excluding rigidly all subsequent testimony.

In the following paper the writer has given a rapid sketch of some of his observations from this point of view. A few of them are sufficiently startling if true, but require, no doubt, further elucidation and a full declaration of authorities. These, when space is more abundant. Meanwhile the reader is invited to study well the accompanying photo-lithographic facsimiles of some of the oldest and most important maps and charts pertaining to our coasts. It is not permitted to every one to see and touch the precious originals, scattered and secluded as they are, in various public and private repositories, throughout Europe and America. Not three persons exist probably who have seen them all. The copies here given, imperfect as they are, speak clearly to the eye, and will doubtless repay careful examination, though a few explanations may aid the reader in understanding them.

And *first*, The Portolano, or marine chart of Juan de la Cosa, made by him at Puerto de Santa Maria, near Cadiz, in 1500 [Plate I]. The original, bought at a public sale in Paris about twenty years ago, for the Queen of Spain, against the writer, for 4020 francs, is now preserved in the Royal Library at Madrid. It is on oxhide, five feet nine inches long, by three feet two inches wide, cut square off at the tail, a little beyond the Ganges and Golden Chersonesus, so as to be attached to a roller; and rounded at the back of the neck, so as to be tied with a ribbon when rolled up after the manner of ancient portolani. The whole world is laid down, including the entire 360 degrees of longitude, on a given scale of fifteen Spanish leagues to a degree. The chart is well drawn, in colors and heightened with gold, altogether a work of art of considerable pretention. It is acknowledged by competent judges, to be the earliest, the most important and the most authentic geographical monument relating to the western discoveries that has come down to us. It was not discovered until after Muños, Navarrete, Irving, Biddle and Tytler had written their works, and hence Humboldt used it constantly and with effect in his *Examen Critique*, as well as in his supplemental chapter prefixed to Ghillany's *Martin Behaim* in 1853. A full sized facsimile was published by M. Jomard, on three double elephant folio sheets, some fifteen years ago. Of the western sheet, or third, not colored, the accompanying reduced facsimile is taken. La Sagra, Lelewel, Ghillany, Kohl and others have used it extensively and described it. All geographers admit its importance, but many raise objections greatly diminishing its authority.

These objections have hitherto, by learned geographers, been deemed unanswerable. They are: *First*, That Cuba is represented as an island in the year 1500, and is misshaped at the western extremity by curving to the south so as to form a kind of gulf, when in fact it was not ascertained to be an island till Ocampo circumnavigated it in 1508, and found it to extend considerably farther to the west than La Cosa's, and having no such curve. *Second*, that the American coast line extending from a point west of Cuba to the *Mar desubierta por Yngleses* gives no proper idea of the Gulf of Mexico, Florida, New York, Cape Cod and other strongly marked coasts, in fact

is mere guess work. *Third*, that the discoveries of the Cabots and Cortereals are not properly laid down, and that the coast line does not resemble that from Cape Race westward. And *fourth*, that "the map has no indication of the degrees of latitude" (Kohl, p. 152) and longitude.

These four objections answered, Juan de la Cosa is vindicated, and his chart becomes *the* authority. Let us look at them. Answer, *First*, that La Cosa, the *Maestro de hacer cartas*, as Columbus styled his chart-maker, did not intend to represent Cuba to be an island (whatever posterity may think of his drawing) is manifest from the following facts. In the spring of 1494 after Columbus, in his second voyage, had sent home from Hispaniola (his Zipangu or Japan) the larger part of his fleet under Antonio de Torres, he resolved with three caravels and about eighty men, to go on an exploring expedition along the south side of Cuba (which he for sometime persisted in naming Juana) supposing it to be continental, or that part of Asia near Mangi. This little fleet reached Cuba on the last day of April at a point named Cabo de Fundabril, previously called by Columbus Cape Alpha and Omega, the point where the West ends and the East begins. Proceeding westward they touched at many places, the names of most of which, laid down by La Cosa, can readily be recognized in the narratives of the Cura de los Palacios and Peter Martyr, as well as in later maps. These names are Cabo de Cruz, Cabo del Serpiente, Fumos, Cabo Serafin, Mangni, Mont, Bienbaso, &c. At length they came to a turn in the coast to the southwest. This place Columbus named Cabo de Bienespera, or Cape of Good Hope, a guiding point leading him on toward the Golden Chersonesus, the bourne of his hopes.

Here on the 12th of June, 1494, Columbus, being compelled from shortness of provisions and other reasons, to turn back, caused his captains, his pilots, his master of charts, and all his sailors to sign a declaration under oath, that they believed Cuba to be part of the Continent of Asia, near Mangi; and Juan de la Cosa added the further particulars that he never saw and never heard tell of any island 335 leagues long, and hence he believed Cuba to be in Asia. A little further on to the south-southwest, amid shoals and islands, picking his way and grazing



the sands, Columbus reached another place which he named Evangelista. Here, from the mast head, one might see coasts to the north, the Bay of Cortes and the Cayos de Indios to the west, and land to the southwest and south, the whole, with islands and keys, appearing continuous so as to form a gulf of considerable extent studded with islets. This body of water Columbus mistook for the Gulf of Ganges! "Indiæ Gangetidis continentem eam esse plagam contendit Colonus," wrote Peter Martyr to Cardinal Bernardino, August, 1495, on the authority of a letter to him from Columbus himself. This place was the farthest point touched in the expedition, "hanc ultimam existemati continentis oram quam ille [Columbus] attigit, vocavit Evangelistam," again wrote P. Martyr. The Admiral longed to go on down the coast, double the Golden Chersonesus, visit Calicut and Arabia, and so return to Spain, ever going west, but necessity compelled him, the next day, to set his face toward Hispaniola.

Here then have we not the key of this mystery, the parent of a hundred geographical blunders, in later maps? Evangelista is on the west side of the Isle of Pines, the Cape of Good Hope is on Cuba to the N.N.E. near Batabano, and a dash of *green* paint, the conventional color for *terra incognita* in old portolani, marks a "cut-off" and completes the Gulf of Ganges! This simple cut-off shows that all beyond was unknown. Three days more, had Columbus persevered toward the west, would have brought him to the end of Cuba, and dispelled all his grand visions of the Province of Mangi, and the incomparable riches of the Grand Kahn of Cathay. Cuba is then here not an island, but is merely cut off in the usual way by La Cosa himself who was there with the Admiral, and who laid down the track of the whole expedition with marvellous truthfulness.\*

\* Ruysch, seven years later (Pl. 2, No. 3) understood this perfectly, and in his Continental Cuba marked this cut-off more distinctly. He has preserved the "Gulf of Ganges," but has disguised some of the names of places. Cape Seraphin where the white priest was seen, is changed to Cvicar [c. vicar?] and Evangelista to C. S. Marci, one of the Evangelists. The south side of Cuba is a literal copy of La Cosa's chart laid down from actual survey in company with Columbus himself, but the north side considered as part of Asia beyond Zipangu, is carried up to about 40° N. latitude, above C. Elicontii the same as in Fra Mauro's map of 1457 and Behaim's globe of 1492. The German geographers of St Dié and Strasburg, (who probably never saw salt water) in their map in the Ptolemy of 1513,

The answer to the *second* objection, as to the *American* coast line from the west of Cuba to Bacalaos is simply that La Cosa intended that line for Asia. In 1500 neither he nor anybody else suspected or dreamed of an intervening Continent. La Cosa projected a map of the whole world, the Eastern Asia of Marco Polo and Sir John Mandeville included. Cutting his map off at the Golden Chersonesus, beyond the Ganges, so as to attach it to a roller, how else could he complete Asia and the 360 degrees of longitude but by the line he drew on the other side of the globe? Asia and America are not *both* laid down. Which is omitted? If this line be the unknown new Continent, what

probably made as early as 1508, (Pl. 2, No. 1) have copied La Cosa and Ruysch both, making Spagnola and Isabella answer for the Japanese islands, all the names being transferred to their Continental Cuba with most of the names of La Cosa and Ruysch Italianized, and almost obscured in the transfer. Corveo, Anterlinoi, Cvlear and Lago de Loro of Ruysch become Coruello, G. delinor, C. lurcar, and lago dellodro in the 1513, while C. Elicontii becomes C. delicontir. La Cosa's Mar Oceanus, north of Cuba, becomes C. del mar usiano and is carried up to latitude 54°. The Gulf of Ganges is not only preserved, with all the islands of La Cosa, but the three mouthed Ganges itself is made to empty into the gulf! All this *Terra de Cuba* was thought somehow, to pertain to Asia, for no one yet had dreamed of an intervening continent.

The north side of Cuba in La Cosa's chart, west of Rio Mares (the farthest point reached by Columbus in his first voyage, the 31st of October, 1492,) is colored as *terra incognita* having no defined coast line. The very accurate manner in which the whole coast eastward of this point is laid down renders it almost certain that La Cosa accompanied Columbus also in his first voyage as his Maestro de Cartas. If so, considering his subordinate position, may not this be in substance the long lost chart of Columbus? The names on the north side of Cuba between Rio Mares and Cabo de Fundabríl written in full are rio Mares, rio Luna, Cabo de Cuba, punta de Mar Nuestra Señora, punta de Santa Maria, Cabo Rico, Puerto Santo, rio de la Vega, Cabolindo and ponta de Cuba, corresponding almost exactly with the log book or journal of the first voyage of Columbus as preserved by Las Casas.

The conclusions therefore to which all these old facts and new readings force one are obvious, and opposed to the generally expressed opinions of geographers. It should, however, be mentioned that Senhor Varnhagen, an earnest and painstaking investigator, whose opinions are generally entitled to the highest respect, in his valuable work on Vespucci, printed in Lima, in 1865, in folio, differs from the writer, interpreting the bay, the three mouthed river, and the point of land, west of Isabella, in the 1513 map, to be the Gulf of Mexico, the Mississippi River, and Florida. It is difficult, on this theory, to account for the island of Isabella being denuded of its names, and the well-known Cabo Fundabríl being transferred to Florida. The influence of La Cosa's chart, and the later maps interpreted by its new readings, will no doubt shed much new light on Vespucci's letters and voyages.

has he done with the well known part of the old Continent? Furthermore, where are Zipangu and the islands of the Eastern Archipelago described by Marco Polo and so ardently sought by Columbus? If Cuba be Zaiton or Mangi, surely Hispaniola must be Zipangu [Pl. 2, No. 3] How else could Columbus reason? Let it be borne in mind that there is great similarity in the coasts of Eastern Asia and America. From all this it is apparent that La Cosa and his map are not responsible for erroneous conclusions drawn by modern geographers.

The *third* objection, respecting the coast line of the Cabots and the Cortereals, from Cape Race westward, may be met by the fact that La Cosa has laid down no such line. Cape Race is in latitude  $46^{\circ} 40'$ , and Cape Sable in Nova Scotia, is  $43^{\circ} 24'$ . La Cosa's coast line in the north, marked by five English flags, begins at latitude  $53^{\circ}$  N. that is the Straits of Belle Isle, and extends very nearly west to the meridian of the Virgin Islands. It is, in short, the northern coast of the Gulf of St Lawrence, pretty accurately depicted. Of course it is to be understood that the Cabots in 1497, as well as La Cosa in 1500, supposed this coast to be in Eastern Asia. This chart carefully compared with Sebastian Cabot's map of 1544 [Pl. 4, No. 1,] and studied with the new material lately brought to light by Mr. Rawdon Brown in Venice, and Mr. Bergenroth in Madrid, will, it is believed, harmonize well, as contemporary documents, and throw into the shade the loose gossip, long after date, reported by Butrigarius, Peter Martyr and Mr. Secretary Williamson. The words *Mar descubierta por Yngleses*, instead of *Mar Oceanus*, show it to be a sea or gulf and not the open ocean. If the reader will lay down on La Cosa's chart Newfoundland, Cape Breton Island, Nova Scotia and New Brunswick in their proper latitudes and longitudes, he will doubtless be surprised at the result, especially when he compares it with the map of F. G. in Hakluyt's Peter Martyr of 1587 [Pl. 3, No. 1]. In this map Bacalaos is laid down as discovered by the English under the grant of 1496 on the north coast of the Gulf of St Lawrence. The discoveries of the Cortereals could not have been known by La Cosa in 1500.

The *fourth* objection is answered by simply looking for a moment at the original map, or at M. Jomard's facsimile, and not at

the imperfect ones generally in use. The indications of latitude and longitude are abundant, and there is a good scale both at the top and the bottom of the chart. The equator is given, and the tropic of Cancer,  $23\frac{1}{2}^{\circ}$ , and guiding lines or parallels pass through the Straits of Gibralter,  $36^{\circ}$ , and Paris,  $48^{\circ} 40'$ . These fixed points, with the scale, will help the reader to the latitude of any other place. Longitude can be determined in a similar way.

The eclipse that took place in Sept. 1494, immediately after his return to Hispaniola from Cuba, was a most important event for Columbus, because it enabled him to determine the longitude of his discoveries. He found that the middle of Hispaniola was nearly five hours west of Seville, or about  $70^{\circ}$ . La Cosa's scale makes this distance to be about  $68^{\circ}$ , sufficiently near, considering the mode of measuring time then, before Copernicus had commanded the sun to stand still. Columbus' mistakes in latitude are difficult to be accounted for, but they do not affect the observations of the Cabots in the north, or those of Vespucci and Ojeda in the south, as very accurately laid down by La Cosa. Columbus in his log book places Cuba and Hispaniola some seven or eight degrees too far north. He seems however to have been aware that he was out in his calculations, and on one occasion threw aside his instruments as defective, preferring to defer his observations till he reached the land. La Cosa has however retained all these errors of latitude of the first and second voyages, though he is nearly correct in his latitude of the northern coast of South America.

Now if these objections are fairly answered, La Cosa not only emerges cleared from a vast amount of unjust criticism, but his chart becomes a beacon of light in the early annals of America. It tells posterity, as it is told nowhere else so truthfully, of Columbus, his discoveries and his mistakes, and depicts in honest lines just how far the Great Explorer groped his way blindfolded toward the west. The American historian has no longer any difficulty in tracing the track of Columbus to the very end, and accounting for the true and false lines in his continental or Asiatic Cuba. He sees how the Asiatic lines grew in the map of Ruysch of 1508, while those of La Cosa remained the same; how also in the maps of Bernard Sylvanus in 1511, of the Gymnasium of St Dié in 1513, of the Margarita Philosophica

in 1515, of Apian and Schoner in 1520, of Bordone in 1521, of Lawrence Fries in 1522, of Orontius Fine in 1531, and of Sebastian Muenster in the Grynaeus of 1532. In all these old maps the geographer can at a glance, now that the key is recovered, trace the true coast lines, for he knows the origin of the false ones, thanks to painstaking La Cosa. Considering the state of geographical, astronomical, and nautical knowledge at that time, and the muddle of the map-makers, it is not to be wondered at that the discoveries of Balboa, of Magellan, of Cortes, of Ponce de Leon and Ayllon, led to some bewilderment, and puzzled even the *cognoscenti* of the Congress of Badajos.

It is to be borne in mind here, however, that many writers claim that the Cabots in 1497 and 1498 discovered and explored the coast of the present United States from Nova Scotia to the Chesapeake Bay, and some even contend that the Cape of Florida was reached ; and hence, as every thing was immediately known in Spain, the discovery of the entire North American coast might have been known to La Cosa in time to be laid down in its general trending though not with accuracy in 1500, from John Cabot's own map, which the Spanish minister in London declares he saw. It matters not whether La Cosa and John Cabot thought it the coast of Asia or an intervening Continent, if it was really laid down from actual observation. But La Cosa positively limits, in a very definite manner, the discoveries of the English, to the *Mar*, or Gulf of St Lawrence. And the highly important Portuguese portolano, made about 1514, one of the earliest and honestest maps known (Plate V) after adding the discoveries of the Cortereals, and Ponce de Leon, leaves the whole space from Nova Scotia to Charleston open, as being entirely unknown. Now these writers are invited to recollect that all the testimony on which these theories are based is not only very loose, but recorded in a gossiping way, sometimes second and even third handed, long subsequent to the events themselves, and have since been quoted and maintained with national asperity, chiefly in diplomatic discussions and sometimes without a proper regard for historic truth. While on the other hand all the contemporary documents recently found tend to show that the Cabots' discoveries were confined to the Gulf

of St Lawrence and north of it. La Cosa's testimony is strong, nor does Sebastian Cabot's own map made in 1544, said to have been engraved by Clement Adams, containing the new discoveries of the English, French, Spanish and Portuguese to 1542, (Plate IV, N° 1) in the least invalidate it.

The new papers of 1497-98 brought to light from the Archives of Simancas and Venice give details only of John Cabot and his voyage of 1497, and simply allude to the expedition of 1498 as not yet returned. Nothing on contemporary authority is known of this latter voyage or of Sebastian Cabot's connection with it. It is always dangerous to attempt the proof of a negative, for any day new documents may turn up. Don Pedro de Ayala wrote to Ferdinand and Isabella from London the 25th July, 1498, of John Cabot, "I have seen the map which the discoverer has made who is another *Genoise*, like Columbus, and who has been in Seville and in Lisbon, asking assistance for his discoveries. The people of Bristol have, for the last seven years, sent out every year two, three or four caravels in search of the island of Brazil and the Seven Cities, according to the fancy of this *Genoise*. The king determined to send out [more ships this year, 1498] because last year they brought certain news that they had found land." This passage is positive, important and suggestive. In the first place it disposes of the pretence that the Continent was discovered on the 24th of June, 1494, instead of 1497, and it suggests a plausible theory to account for John Cabot's movements between the granting of his charter in March, 1496, and the sailing of his ship in May, 1497. During part of this long year this *Genois* might have been with his fellow townsman Columbus at Seville, who had just returned from his second voyage of three years, bringing his chart-master, Juan de La Cosa with him. Cabot was a Venetian only by naturalization. This is of course only a suggestion, but it shows the early connection of the Cabots with Spain, if not with Columbus and La Cosa.

It is well known, however, that Sebastian Cabot in October, 1512, was residing at Seville, with a royal commission in his pocket as Captain, awaiting orders, in the service of the King of Spain. Here he became the intimate friend of Peter Martyr of the Council of the Indies, and shortly after became a mem-

ber of that board himself. A little later, rising in honors and salary, he became in 1518 the Pilot Major of Spain, and in 1524 was deputed to preside over the celebrated geographical Congress of Badajos. Now in these several official positions it was his duty to superintend and watch over all the discoveries and explorations of the Spanish navigators. He was a man of vast experience and was presumed to know all that had been *discovered* by his contemporaries. Is it reasonable, therefore, to suppose that if he had been down the coast from Bacalaos in 1498 to  $30^{\circ}$  or to  $25^{\circ}$ , he would in 1513, in 1520, in 1524 and 1526, have yielded without a word of protest, these discoveries, to Ponce de Leon, Ayllon and Gomez, to say nothing of Veraz-zano. No writer pretends to deprive these navigators of their rights as *discoverers*, and no protest or contemporary claim is forthcoming from Sebastian Cabot, who was all the time in the field and well acquainted with the affairs.

Before 1520 the Portuguese began to comprehend better the longitude of the Moluccas and other of their possessions in the East, and geographers began to suspect an intervening space not accounted for. At first strange guesses were recorded as to the extent and direction of the South Sea, by Schoner and others, but after the appearance of the map of Cortes [Pl. 4 No. 7] in 1524, the culmination of absurdity appeared in the double-hearted projection of Orontius Fine in July, 1531, [Pl. 3, No. 3 and 4]. Schoner in describing his own newly improved globe in 1532, exactly describes this map. The South Sea was represented as south of the equator, while Asia was brought forward to Bacalaos. One can readily see how all this grew up, as one can also see how, by slow degrees, their false Asia receded and melted away, for above 200 years, as the western coast of America and the eastern coast of Asia were explored by Spanish, English, French and Russian navigators, till the year 1727, when a strait was opened by Behring, and Asia and America became divorced.

It was the writer's intention to try and trace out the history of the first exploration of the entire coast of the United States, until the last thread of the Asiatic line was expunged by Capt. John Smith before 1614. But that labor, even if he had time and space, is reserved for an abler pen. The Rev. Dr. Leonard

Woods, late President of Bowdoin College, has on the anvil as already announced, for the Maine Historical Society's next volume, an original unpublished manuscript of Richard Hakluyt, of the highest historical and geographical interest. It is entitled "A particular discourse concerning the greate necessitie and manifold comodities that are like to grow to this Realme of Englande by the westernre discoveries lately attempted, written in the yere 1584, by Richarde Hakluyt . . . at the requeste of Mr. Walter Raleigh before the comynge home of his two Barkes [from Virginia]," &c. This valuable manuscript, consisting of sixty-three large closely written folio pages, was in the possession of the writer for two or three years, having fallen into his hands some sixteen or seventeen years ago by a piece of good luck, after a bibliographical tournament memorable as any recorded by Dibdin. After fruitless endeavors to find for it a resting place in some public or private library in America, and subsequently in the British Museum, it finally became the property of Sir Thomas Phillipps. So impressed was the writer with its importance that immediately on learning the object of Dr. Wood's mission to England in the autumn of 1867, he called the doctor's attention to it, and suggested his procuring a copy, if possible, for publication by the Maine Historical Society. He trusts soon to have the pleasure of seeing Richard Hakluyt again in print, not alone because he is an old friend, but because he is likely to render any further discussion of the present subject, on the part of the writer, superfluous.



## HISTORICAL AND GEOGRAPHICAL NOTES

1453—1530

---

A retrospect of four centuries, with a rapid glance at the progress of modern discovery, exploration and invention, will probably serve as an appropriate introduction to our projected scheme of Interoceanic Communication by means of the Tehuantepec Railway, and show that the time is near at hand for its accomplishment. Let us, therefore, go back for a moment, and survey the little old world and its inhabitants as they appeared about the middle of the fifteenth century. According to Ptolemy, the best recognized authority, whose geography had stood the test of thirteen hundred years, the then known world was a strip of some seventy degrees wide, mostly north of the equator, with Cadiz on the west, and farthest India or Cathay on the east, lying between the frozen and burning zones, both impassable by man. The inhabitants, as far as known in Europe, were Christians and Mohamedans, the one sect about half the age of the other. Christendom, the elder, that once held considerable portions of Asia and Africa, had been driven back inch by inch, in spite of the Crusades, even from the Holy Land, the place of its birth, up into the northwest corner of Europe; and both in lands and people was outnumbered six to one by the followers of Mahomet. For seven hundred years the fairest provinces of Spain acknowledged the sway of the Moors, and the Mediterranean, from Jaffa to the Gates of Hercules, was under their control. The crescent was constantly encroaching on the cross; while Christendom, schismatic, dismayed, demoralized and disheartened, seemed almost incapable of further resistance.

India beyond the Ganges, from the days of Moses, Alexander, and Aristotle, to say nothing of the geographers Pomponius Mela, Strabo and Ptolemy, was deemed the land of promise, the abode of luxury, the source of wealth, and the home of

the spices ; but the routes of commerce thither, via Venice and Genoa, by the Red Sea, Egypt, the Nile, Arabia, Asia Minor, the Black and Caspian Seas, through Persia and Tartary, were one by one being closed to Christians. The profits of the overland carrying trade were mostly in the hands of the Arabians, who inherited it from the Romans ; but Memphis, Thebes, and Cairo, that flourished by it, had declined as it fell off, and yielded to Alexandria nearer the sea. Finally, in 1453, Constantinople, the Christian city of Constantine, fell into the hands of the Turks, and with it the commerce of the Black Sea and the Bosphorus, the last of the old trading routes from the East to the West. Christendom for a time was disconsolate, and could only "pray for the conterition of the Turks." The whole of the carrying trade passed into the hands of middle men or agents, who passed goods without news, and India became more a land of mystery than ever ; but this apparent misfortune proved to be the beginning of a new and brighter era.

The learned Christians of Constantinople, with nothing but their heads and their books, fled in exile into Italy, and became its schoolmasters. At once began there the revival of learning, which soon extended throughout the West. "Westward the course of empire takes its way." The Medici family of Italy, at Venice and Florence, welcomed these learned Greeks, and bought their precious manuscripts of ancient lore. The gunpowder of Europe had already silenced the Greek Fire of Asia. On the Rhine the young printing press was just giving forth its first sheets. The compass and the astrolabe, recent inventions, began now to give confidence to mariners and teach them that, though the old paths of trade overland were closed, they might venture on new ones over sea. In 1453, in western Europe there was no tea, no coffee, no tobacco, no Indian corn, no potatoes ; and many of the necessities of our day were not even known as luxuries. Though the Crusades had failed in their immediate objects, they had exposed the secrets of the India trade, and the vast revenues of the eastern cities. The manuscript travels of Marco Polo and Sir John Mandeville had found their way into the hands of thinking men. Venice was already waning, preparatory to yielding its trade to Portugal, the then most rising and active maritime power. Prince Henry the Nav-

igator had still ten years to live to carry out his great schemes of discovery and exploration of the western coast of Africa. He was an ambitious student of geography, history, mathematics, astronomy, and navigation, and for almost forty years had stood alone.

At the early age of fifteen the Prince had a successful brush with the Moors at Ceuta, opposite Gibraltar; and by 1418 had crept down the coast of Africa to Cape Nun, lat.  $28^{\circ} 40'$ , the southern boundary of Morocco. In 1434 his captains doubled Cape Boyador, and seven years after obtained from Pope Martin V a grant to the crown of Portugal of all he should discover from this cape to the Indies. In 1442 Rio del Oro was reached, and gold and negro slaves brought back. These were two real stimulants to Portuguese discovery, avarice, pride, and wealth, though the conversion of the infidels to Christianity, was, no doubt, a strong additional motive power. The reintroduction of negro slavery, and the part it soon played in commerce and the world's progress, may be ascribed to Prince Henry. He encouraged the traffic, which, with the love of gold and the hatred of the Moors, aroused his countrymen to his projects, and insured the promotion of discovery, in so much that by the time of the fall of Constantinople, his captains had reached Cape Verde, lat.  $14^{\circ} 45' N.$ , probably a few degrees beyond, and had exploded the old theory of a boiling belt about the equator.

In all ages there had been a prevailing notion that one might sail round Africa; but when once it was demonstrated that Portuguese sailors could cross the equator and survive, Prince Henry's vague idea of reaching the land of spices by this route was confirmed. At all events, he was schooling hardy sailors, and training them for bolder work, so that soon after the date of the fall of Constantinople, Italy and Portugal had reached that turn for adventure and enterprise, which spread like wildfire throughout the other states of Europe, and caused the entire revolution in the commerce of the world.

In 1453, Columbus was a lad of six years at Genoa, Vespucci of two at Florence and John Cabot a youth at Genoa (?) The new learning at once took deep root. When these three Italian boys became men, behold how changed! The sciences of mathe-

matics, astronomy, and navigation had grown with their growth, and developed with marvelous rapidity. The press had spread broadcast the learning of the ancients. The secrets of the earth were inquired into and revealed. Many islands of the Atlantic had been discovered and described, and sailors knew the coasts of Europe and Africa from Iceland to Cape Verde. But above all, the knowledge of the sphericity of our earth was no longer confined to philosophers. Alexander had told Aristotle what he knew of the East, and Aristotle had written down that there was but a small space of sea between Spain and the eastern coast of Asia. Strabo had said that nothing stood in the way of a westerly passage from Spain to India but the great breadth of the Atlantic Ocean; but Seneca said this sea might be passed in a few days with favorable winds. Pomponius Mela and Macrobius put in like testimony, with certain difficulties about passing burning zones, and the earth being shaped like an egg floating in water. All these opinions were rehashed and digested by Ptolemy of Alexandria, in the second century, who first properly reduced the globe into 360 degrees of latitude and longitude. In latitude he was as correct as he was incorrect in his longitude. Roger Bacon, an Englishman, again summarized these theories in his *Opus Majus*, in the thirteenth century; and in the fifteenth century, Pierre d'Ailly, a Frenchman, reviewed the whole question, bringing together the opinions of the ancient writers named, as well as the fathers of the church, including modern philosophers, travelers, and theologians, especially Roger Bacon, Marco Polo, and Gerson, and gave to the world his well-known *Imago Mundi*. This celebrated work, finished in 1410, was afterward the guide, companion and friend of Columbus. The learned author was for three years Provost of the ancient Ecclesiastical College of St Dié in Lorraine, away up in the Vosges Mountains, in the remotest corner of France. This was on the very spot where, nearly a century later, in the Gymnasium within the same precincts, a confraternity of some half dozen earnest students, lovers of geography, of whom the poet Mathias Ringman was the soul, in a little work called *Cosmographie Introductio*, printed there in the kalends of May, 1507, suggested that the *Mundus Novus* of Vespucci should be named America, after a man, inasmuch as Europe and Asia had been

named after women. Thus a little mountain town of France first gave aid and comfort to Columbus and afterwards a name to the New World.

As early as 1474, Paul Toscanelli, a learned physician of Florence, sent to Columbus a Chart made after the narrative of Marco Polo, and was in correspondence with him on these very subjects, showing that even then the plans of Columbus were maturing. In 1478, the great geographical work of Ptolemy, with the twenty-seven beautiful copper plate maps, was printed at Rome, and about the same time many other of the ancient historians, poets, philosophers, mathematicians, and astronomers saw the light. The *Imago Mundi* was printed at Louvain, in 1483, and there still exists at Seville, Columbus' own copy, with manuscript notes said to be his, discovered and described about forty years ago by our countryman, Washington Irving.

Meanwhile, the work of discovery and exploration was earnestly pursued by the Portuguese. In 1454 Prince Henry secured the services of Cadamosto, an intelligent Venetian, well acquainted with the trade of the Mediterranean and the East, and sent him down the coast of Africa, where he reduced the explorations and the trade to order, and pushed southward the discoveries to the Cape Verde Islands by 1460, the year of Henry's death. By 1462 Pedro de Cintra had crept down the coast to some 300 miles beyond Sierra Leone. In 1463 Gibraltar was captured by Spain from the Moors. Kings Alphonso and John continued the African discoveries with so much energy that, after Diogo Cam's passing Congo in 1484, the bold captain, Bartholomew Dias, reached the Cape of Good Hope, and looked beyond it in 1487, thus completing with marvelous perseverance an exploration of some six thousand miles of coast line in seventy years. Bartholomew Columbus was in this last expedition.

Meanwhile King John had sent overland through Egypt Pedro de Covilham, to India and Eastern Africa to gain information and report. In 1487 he reported that he had visited Ormuz, Goa, Calicut, etc., and had seen pepper and ginger, and heard of cloves and cinnamon. He visited the eastern coast of Africa, went down as far as Sofala, and returning northward, sent a message to King John that he had learned for certain that if Dias should pursue his course round Africa he would reach

India over the Eastern Ocean via Sofala. This theoretical discovery of Covilham exactly coincided with the practical one of Dias.

All these events were but leading up to the grandest discovery the world ever knew, but it is difficult to trace the precise origin and the gradual development of the plans of Columbus. We know, however, that at the early age of fourteen he went to sea, educated with small knowledge of Latin and less Greek; and in 1474, at the age of twenty-seven, was in correspondence with Toscanelli, and became the father of Diego, the boy for whom, some ten years later, he begged a night's lodging at the Convent of La Rabida.

By the year 1487, when the mystery of a path to India around Africa was solved, Columbus had not only completely worked out his great idea of sailing West to find the East; but had offered his services in carrying it out, first to his native city, Genoa, without success, and had two years before brought it to Spain from Portugal where his proposals had been openly spurned and ridiculed, but treacherously though unsuccessfully tested. It is tolerably certain that much of his time had been spent in active and practical maritime service, for he had been down the coast of Africa as far as El Mina; had resided at Porto Santo, one of the out-lying Portuguese islands of the Atlantic, the daughter of whose first governor had become his wife; had visited England and Iceland, and was acquainted with the whole of the Mediterranean. His brother Bartholemew had been a chart-maker at Lisbon, and was his advocate at the court of Henry VII.

We know from the writings of his son Ferdinand that Columbus was both a practical and a learned mathematician as well as navigator. He had read probably all the compilations named above, and his own experience, together with what he had learned from the Portuguese, had enabled him, with his Marco Polo in his pocket, to sift all the vague and contradictory notions of the ancients as to the Antipodes and the shape of our earth, as well as to cypher out a theory of his own. For seven long years, after being worn out and disgusted elsewhere, he danced attendance on the Spanish court, with no fortune but his idea; sometimes threadbare and barefooted, ever pressing his suit, never

flagging in his confidence, questioned and ridiculed by commissions of geographers and scientific men, without ever being able to penetrate the conservative ignorance of the learned and courtly, or, as he complained, to convince any one man how it was possible to sail west to reach the East. But Time was working for him then, as it is now for Interoceanic Communication.

The fortieth year from the fall of Constantinople, the forty-fifth of the age of Columbus, witnessed the death of Lorenzo de Medici; but other suns were rising. Copernicus, in the far north, was in his twentieth year; Erasmus, his twenty-fifth; Cortez, his seventh; and Luther, his tenth. Martin Behaim, the old geographer of the Azores, aged sixty-two, was home on a visit to his native city of Nuremberg, from which the tide of commerce was ebbing. Here, in 1492, he made his famous globe of the whole world, as if to lay down upon it all the knowledge (and all the ignorance) of the geography of the earth, preparatory to the opening of new books. The same eventful year witnessed the expulsion of the Moors from Spain, the opening of the Mediterranean, and the discovery of America. Mohamadanism received its first check, and Christendom received a New World.

These three Italian boys had become men. When Columbus had balanced his egg for Spain, it was easy for Vespucci and the Cabots to do it for Portugal and England. Italy, whose noble sons did this in foreign service, never acquired a foot of the newly discovered lands for herself, yet how much of the honor was and still is hers.

In 1493, within three months from the return of Columbus, Alexander VI, a Spaniard, a Pope of not a year's standing, wishing to reward Ferdinand and Isabella, for their struggles in expelling the Moors, divided our globe into two parts, by a line of demarcation passing from pole to pole, one hundred leagues west of the Azores and Cape Verde islands, giving to Spain all she should discover within  $180^{\circ}$  to the west of it, leaving to Portugal all her African discoveries and the Indies for  $180^{\circ}$  east of it.

But poor Portugal, that had been struggling seventy years in the dark in her circuitous route to India round Africa, jeal-

ous of the new short cut of Columbus, which had been offered to her and refused, protested against the position of this meridian. It was finally settled in the treaty of Tordesillas, of June, 1494, with the Pope's approval, that the line should stand at three hundred and seventy leagues west of the Azores. Had the King of Portugal's geographers and pilots advised him to contend for a line farther east instead of farther west, he would have received within his half the Moluccas and the other Spice-ries. As some compensation for this geographical blunder, however, he secured a foothold in Brazil. Both nations were now running a race of discovery of India by divers routes. By India is here meant all the East beyond the Ganges, including China, Cathay, Mangi, Japan, and the Spice Islands. The acquisitions of the Spaniards were named the West Indies, while those of the Portugese were called the East Indies.

Never was great discovery more modestly announced. "*A Letter of Christopher Columbus, to whom our age is much indebted, respecting the Islands of India beyond the Ganges lately discovered,*" dated February, 1493. Columbus thought his success complete. He aimed at Zipangu, or Japan, and to his dying day in 1506, believed that he had found it nearly where his calculations had placed it, but never was man more mistaken, and never did mistake produce greater results. Believing our earth to be a globe, Columbus reasoned correctly that by sailing west he would come to the East of Marco Polo, but from want of knowledge of longitude, he, like everybody else, from Ptolemy down, was vastly deceived as to the size of the globe. From Cadiz to the Ganges the distance had been computed from the days of Alexander at about  $180^{\circ}$ , or half round the globe. From the Ganges to the Corea and Cathay, and thence to Zipangu fifteen hundred miles more, the distance was also exaggerated by Marco Polo. So that, still going east, the distance from Zipangu to Cadiz was calculated to be about equal to the space from Palos to Saint Domingo. Upon this error in longitude hung no doubt the problem of circumnavigating the globe, for had Columbus suspected the real distance to Japan by the west, he would never probably have ventured to penetrate the "sea of darkness," or have found sailors bold enough to accompany him. The actual distance from San Francisco to



Hong Kong is nearly one-third more than Columbus had reckoned it from Spain to Japan.

The sensation produced throughout Europe by this discovery of a short and direct route to India was great, but for nearly forty years nobody suspected the truth. The simple letter of Columbus in various editions, in prose and verse, was about all that was published for ten years, but the intelligence gave a new impulse to maritime discovery and commercial enterprise. Columbus, with full honors, sailed in 1493, with a well equipped fleet to explore his Eastern Archipelago. He returned to Spain in June, 1496. Juan de la Cosa, author of the world-renowned portolano of 1500, went with him as Master of Charts in this second voyage. They proceeded directly to Dominica, one of the Windward Islands, thence to Porto Rico, St. Domingo, south side of Cuba, Jamaica, &c.

The Portuguese now redoubled their energies, and in 1497-98, Vasco da Gama, just ten years after Dias' discovery of the Cape, circumnavigated Africa and reached Calicut. The same year John Cabot under a Patent of Henry VII, dated March 5, 1496, in trying for a short cut to Cathay by the northwest, discovered certain islands, probably in the Gulf of St. Lawrence, and took possession, supposing them to be off China, and erected conjointly the flags of England and Venice, on the 24th of June, 1497.

The next year Sebastian Cabot, under a supplemental license dated February 3, 1498, sailed again with the view of planting a colony and promoting trade, but no contemporary account of the voyage being known, it is difficult to extract any reliable information of this failure from the confused gossiping reports that have come down to us. The discoveries of 1497 were in 1498 reported to the kings of Spain by their vigilant ambassador in London, with the intimation that he had seen John Cabot's chart, and would send home a copy of it. What steps followed it is difficult now to trace, but the result appears to be that Henry VII, never following up the discoveries after 1498, Sebastain Cabot remained quietly at home till after the death of Henry, when in 1512 he took service under the king of Spain, permitting his English and Venetian rights of discovery and plantation to lapse. Thus ended the first English and Venetian attempts to reach Cathay by the northwest.

On the 30th of May, 1498, in his third voyage, Columbus first touched the continent of America in Venezuela, though some contend that Vespucci had anticipated him by nearly one year. The natives called it Paria, and Columbus reasoned himself into the belief that it was Paradise, whence our first parents had been driven. In 1499, Vicente Yañez Pinzon and Alonzo de Ojeda, private traders, with the latter of whom was Vespucci on his second voyage, visited Brazil under Spanish flags; and in 1500 Brazil was discovered accidentally (?) by Cabral, in that great fleet which the success of Gama had called forth. He was blown out of his course on his way to India, and took possession for the Portuguese. Portugal thus gained undisputed possession of Eastern Brazil by rule of ignorance of longitude, claiming it as hers because it was east of the line of demarcation. All the science of Spain at that time could not disprove this, and therefore Pinzon abandoned it to the Portuguese.

The same year the Portuguese hearing of the voyages of the Cabots, and probably suspecting irreverence in the English for Papal bull lines of demarcation, sent Gaspar Cortereal to follow in their track, who returned in the fall of 1500. Between May 15 and the 8th of October, 1501, a second voyage with two ships was made by Gaspar Cortereal, and laborers (slaves) brought back to Lisbon, but Gaspar himself never returned. A third voyage was undertaken by Miguel Cortereal from Lisbon to the northwest the 10th of May, 1502, in search of his brother, but no tidings ever came back. Then the king dispatched two more vessels to cruise in search of the missing ones, but they returned without any trace of the lost brothers, and thus ended the Portuguese attempts to reach Cathay by the northwest.

In 1501 New Granada, Darien, and Panama were taken possession of for the Spanish by Bastides, and in 1501-2 Vespucci explored the coast of Brazil for the Portuguese, it is said, as far as 50° S. lat., within two or three degrees of the strait, and in 1502 there was written an account of his expedition, which was soon after printed, under the title of *Mundus Novus*. The years 1502 to 1504 were occupied by Columbus in his fourth and last voyage, in which he was accompanied by his brother

Bartholomew, and his son Ferdinando who afterwards wrote a life of his father. He explored the coasts of Central America from Truxillo in Honduras to Darien, still looking for the Ganges and inquiring for the home of the Grand Kahn. An account of this voyage, coming down to July 7, 1503, was printed at Venice in 1505.

In 1502 Valentim Fernandez, a German, attached to the household of the ex-queen of Portugal, edited and printed at Lisbon a collection of voyages in the Portuguese language, comprising Marco Polo, Nicolo Conti, Santo Stephano, &c., with a view of stirring up the people to a more lively interest in the commerce and navigation of the Indies. The success of Columbus and the Cabots is referred to, and the speedy return of Cortereal from the north, from his second voyage, is expected. This magnificent folio volume, the first important book (not biblical) printed in Portugal, must have had a powerful effect in drawing popular attention to the land of spices. It was the first collection of voyages printed in the vernacular tongue, and could be read by all the unlearned who had a penny to venture. It was translated into Spanish, and printed at Seville in 1503. No rarer books are now known to geographers. In May, 1507, the four voyages of Vespucci were published for the first time together, in Latin, at St Dié, in France, as before stated, as an appendage to a little work on cosmography, a science which now began to assume new and startling importance.

On the third of November, the same year, there was published in Italian, at Vicenza, a most important collection of voyages under the title, *Countries newly discovered, and the New World of Albericus Vespucci*, containing accounts of the voyages of Cadamosto to Cape Verde, in 1454-5; of de Cintra to Senegal, in 1462; of Vasco da Gama, in 1497-1500; of Cabral, in 1500-1; of Columbus (three voyages) 1492-1498; of Alonzo Negro and the Pinzons; of Vespucci (four voyages); of Cortereal, &c. This work was the next year, 1508, printed in Latin and German.

All these new geographical works hitherto printed, it will be perceived, pointed to the same thing, enlightenment of the public as to India beyond the Ganges, and how to go and trade thither. In 1508, for the first time in print, all these discov-

eries were collected and laid down in a beautiful copper-plate map, by Johann Ruysch, a German who had probably\* visited the new found islands with the Cabots, and knew well what he was doing. It appears in the Ptolemy of 1508, published at Rome, accompanied by *A new Description of the World, and the new Navigation of the Ocean from Lisbon to India, by Marcus Beneventanus*. A careful study of this map and its descriptive text, if we exclude all subsequent publications, and look at the world as seen by the geographers of that day, will greatly aid us in clearing up many apparent inconsistencies.

Ruysch lays down three distinct and independent fields of discovery. First, the Archipelago of Columbus in the center, filling a space of above a thousand miles from north to south, and open to India. This part of the map was no doubt laid down from Columbus' own letter, the only authority, in 1507, existing in print. He had, indeed, coasted along Paria from Trinidad westward, in June, 1498, as Pinzon, Ojeda, and others did subsequently, supposing it to be another large island, or part of the mainland of Cathay, but nothing of this had then been printed. Second, the *Mundus Novus* of Vespucci, being the eastern coast of South America from Darien to Upper Patagonia, one vast Island with an unknown background. The authority for this was what has since been called Vespucci's "Third Letter," first printed at the end of 1502, or probably early in 1503. And third, the discoveries of the Cabots and the Cortereals in the north, represented by them as part of the mainland of Asia. This portion of the map is only Marco Polo's description of Cathay extended considerably to the northeast, and modified by the experience, probably, of Ruysch

\* Beneventanus says "Joannes vero Ruiseh Germanus Geographorum meo judicio peritissimus, ac in pingendo orbe diligentissimus cujus adminiculo in hac lucubratiuncula usi sumus, dixit, se navigasse ab Albionis australi parte; et tandem quo ad subparallelum ab subaequatore ad boream subgradum, 53, pervenit; et in eo parallelo navigasse ad ortus littora per angulum noctis atque plures insulas lustrasse, quarum inferius descriptionem assignabimus." *Anglicé*: But John Ruysch, of Germany, in my judgment a most exact geographer, and a most painstaking one in delineating the globe, to whose aid in this little work I am indebted, has told me that he sailed from the south of England, and penetrated as far as the 53d degree of north latitude [straits of Belle Isle], and on that parallel he sailed west toward the shores of the East [Asia], bearing a little northward [*per angulum noctis*] and observed many islands, the description of which I have given below.

himself, and the information he gathered from the Bristol men, when he was with them in 1497-8 and the discoveries of the Cortereals.\*

Columbus had placed his discoveries in the Indian Archipelago beyond the Ganges, and the world accepted the names he gave to the separate islands. No new general name was required. The discoveries of the Cabots and the Cortereals being also in

\* The chart of Juan de la Cosa, representing the then known world bearing the date of 1500, is not overlooked, but its significance, so far as the coast line of the United States is concerned, has been so manifestly distorted by every one who has described it, from its discovery by Humboldt in the library of Baron Walckenaer, nearly forty years ago, down to the present day, that the writer hesitates to venture his opinion. But by long study and comparison of this with other early maps, especially with those of Ruysch and Peter Martyr of 1508 and 1511, he is convinced that the coast line, from the most westerly of the five English flag-staffs marking the extent of Cabot's discoveries southward and westward, to a point west of Cuba, precisely like the map of Ruysch seven or eight years later, is laid down as the northeastern coast of Cathay, from the descriptions of Marco Polo. If our Maine friends, therefore, will place behind their red line border, Marco Polo's name *Mangi*, they will see that this territory is farther "down East" than is generally supposed, being indeed eastern Asia. The word Cuba, instead of *Juana*, the name given by Columbus, and the fact that it is represented as an island have been strenuously objected to by geographers, but both these objections will be answered in another place. [See explanatory preface.]

La Cosa perished in Ojeda's mad expedition in Dec., 1509. He was a clever fellow, and a great favorite, and used to boast that he knew more of the geography of the new lands than did Columbus himself. Indeed, of all others, says Peter Martyr in 1514, his charts were the most esteemed. His knowledge and experience were great, for he had been, between the years 1493 and 1509, on no less than six exploring expeditions, either as Master of Charts or commander, with Columbus, Ojeda, Vespucci, and Bastides, and had visited repeatedly the entire coast, from Paria to Uraba, and thence on his own account, north to the middle of Yucatan, as well as most of the islands in Columbus' vast Archipelago. When with Bastides, in 1501-2, he found that the Portuguese were meddling on the wrong side of the line of demarcation, endeavoring, probably, to find a shorter route to Calicut via Darien, and therefore, on his return to Spain, La Cosa was sent to Lisbon to remonstrate against this encroachment. He was there imprisoned and was not released till August, 1504. Nothing daunted, the next year, 1505-6, he went on an exploring and trading expedition of his own to Uraba and Panama, and on another similar one in 1507-8. On the 11th of November, 1509, he embarked with Ojeda from Hispaniola, and perished soon after. From this it will be seen that he might be in Spain chart-making, from June to October, 1500; from September, 1502 to 1504, autumn, (except when in prison in Lisbon); and again parts of the years 1506-7, as well as parts of 1508-9.

La Cosa had, therefore, ample time, if necessary, to touch up his great chart of the world, made and dated in 1500, but a careful examination of the whole chart will

the East, were so recognized as they placed them, and required no new general name, but their names of particular localities, such as Terra Nova and Bacalaos, were adopted. But as to the *New World* described by Vespucci, the case is different. This large country was undoubtedly new, and as his was the first description of it printed, his friends of the Vosges Mountains, lovers of geography, sought very properly, in 1507, to compliment him by giving it, instead, the beautiful name AMERICA.

show that it gives no information later than its date. The date is positive, and there is probably no reason to doubt it. But as his own discoveries and explorations west of Mont San Eufemia towards Uriba, Darien and Panama made from 1501 to 1508 are not laid down, is it not probable that the chart had passed out of the maker's possession, and was therefore beyond his reach for retouching? There are many other points for discussion, but as the writer has never had under his eye the original chart, but judges only from M. Jomard's excellent colored fac-simile on three double elephant folio sheets, he feels that he is treading on ticklish ground. The fac-similes (greatly reduced in size) given by Humboldt, Ghillany, Lelewel, Kohl and others, are in many respects defective, and tend to mislead the student, inasmuch as the coloring, and the lines of latitude and longitude are left out. Some names are misplaced and others are misspelled, while many important ones are omitted altogether. Only the western sheet or third, is given (except by Humboldt). But it should not be forgotten that the chart is intended to represent, on a plain, the entire globe as far as known in 1500.

There is a broad green border above and beyond the Ganges, showing that the northeast of Asia is *terra incognita*. The same *green* also covers what is now North and South America, and therefore being unknown the lines and ornaments are not to be mistaken for rivers and lakes. But La Cosa had the same authorities up to the Polissacus river and bay, in latitude 52° north that Behaim had for his globe made in 1492. Hence the two works agree remarkably well, but La Cosa, taking advantage of the seven years progress in geography, has attempted to complete Asia by laying down its northeastern coast on the other side of the globe, from somewhere about Zaiton in the Corea, to and some thirty degrees eastward, beyond the Polissacus river and bay, through the kingdoms of Gog and Magog, and thence by a dream line connecting Asia with the discoveries of the Cabots and the Cortereals. The Polisanichiu river of Fra Mauro in 1457 is the Polissacus of Ruysch and the Ptolemies of 1511, 1513, 1535, and 1540. These and the Posacus of Schoner, the Pulusangu of Ortelius, and Pulusangu in later maps, are probably the Amoor river of our day. At all events, the river and bay are in eastern Asia, are about 50° to 52° north latitude, and therefore, America on La Cosa's chart cannot extend further west than the left flagstaff, the meridian of Porto Rico. The three rivers on the three reduced fac-similes are not in the original map of La Cosa, and on Dr. Kohl's fac-simile the important words, *Mar descubierta por Yngleses*, are placed too low down and half an inch too far west, thus conveying the idea that the English had discovered Mangi.

In short, La Cosa's coast line, from Cuba to the first flagstaff, was intended for Asia, and to this day answers better for Asia than America. The student, there-

This was done without the knowledge of Vespucci, and was never intended to interfere with the just rights and claims of Columbus. The truth is, there was then no other book in print describing Brazil but Vespucci's very simple and interesting letter, written (but in what language it is doubtful) probably immediately after his return in September, 1502. He gave the country he described no name, but the translator into Latin entitled his little tract *Mundus Novus*. But time wore on, and the mistakes of the geographers, as well as those of Columbus and Vespucci, are made apparent.\*

In 1505-6 northwestern Honduras and Yucatan were seen by Solis and Pinzon, and in 1508 Juana (henceforth called Cuba) was circumnavigated by Ocampo, thus dispelling the doubt about

fore, who is not clear on these points is liable to get the Polisacus (sometimes spelled Plisacus) Bay, the Gulf of Maine, Rio Gomez, Cathay, Memphramagog, Gog and Magog, Quinsay, Cape Cod, Zaiton, Zipangu, Capes Race and Henlopen, Mangi, Carolina, Ciambu, Florida, Chicora, Cuba, etc., into a beautiful muddle. This is no exaggeration. This utter confusion has been made by compilers and amateur geographers from the times of Hylaconilus, Apianus, Schoner, Laurence Fries, Orontius Fine, and Muenster, to the present day, and no doubt will continue so until geographers look more carefully into the chronology and bibliography of their subjects. With these explanations this map is perfectly intelligible, and is reconcilable with other good maps made since the discovery of the Pacific in 1513, when America first began to stand alone in geography independent of Asia. The question next to be asked is, how far west and south did Sebastian Cabot go in 1497-8? According to La Cosa and Ruysch, as far probably as the extent of the Gulf of St. Lawrence. Compare Hakluyt's map of 1587. Ruysch differs from La Cosa only as he had to record also the discoveries of the Cortereals. The remark of Peter Martyr, in 1515 (after their eyes were opened to the size and shape of the globe by the discovery of the Pacific) about Cabot's reaching on the American coast the latitude of Gibraltar, and finding himself then on a meridian of longitude far enough west to leave Cuba on his left, is simply absurd, dilemmatize it as you will. Such a voyage would have landed him near Cincinnati.

\* A little book, hitherto unknown, written by Walter Lud, and printed at Strasburg in 1507, entitled *Speculi Orbis Declaratio*, discovered by the writer in 1862, has been the means of clearing up many unjust aspersions of historians against Vespucci, and explaining the true state of affairs. The book is now in the British Museum. The writer, after unsuccessful endeavors for two years to place it in America, at the end of March, 1864, had the great satisfaction of calling the attention of his friend, R. H. Major, Esq., to it, and pointing out to him the passages referring to the Vespucci books. How well Mr. Major has used these materials his excellent paper on the Manuscript Map of Leonardo da Vinci, printed in the *Archæologia* and his admirable *Life of Prince Henry the Navigator*, abundantly show. The next year the writer called Monsieur Harriette's attention to it, and in his *Bib. Am. Vet.* it appears, under No. 42.

its being Zipangu, or part of the main land of Asia. It was found to be a long, narrow island, extending east and west, and not north and south, like Zipangu. A strange confusion now began to seize the German geographers of Strasburg and Vienna. They made Cuba an island, and called it Isabella, and then transferred all the names from Isabella to a mainland, named usually, Terra de Cuba, connecting it with Paria (sometimes with and sometimes without a narrow strait) standing bolt upright, and extending to  $45^{\circ}$  north latitude, with a point like Florida, and a gulf to the west of it. This was still supposed to be part of Asia, the Florida-like projection being the Corea, and the gulf, the sinus Gangeticum, but in reality existed only in the imaginations of the geographers, like Antilla and San Brandan. It holds on their maps about twenty names, some of which are found on Ruysch's large island or main land west of Spagnola, and all of which are found on early maps, especially on a Portuguese portalano compiled by Lelewel under date of 1501-4. It is in the Ptolemy of 1513, extending up to  $45^{\circ}$  with the three-mouthed Ganges and the Gulf of Ganges, while on the globe of Schoner, of 1520, it reaches  $51^{\circ}$ , and is separated from Zipangu by five or six degrees of Balboa's newly discovered South Sea which by a strange guess is carried due north to the pole. Off to the northeast, in its proper latitude and longitude, most of these maps have Terra de Corte Real as a large island, extending probably as far as the Cabots and the Cortereals discovered—that is, as far west as the meridian of Porto Rico. Some maps have it Terra de Cuba, others Paria; and one, in the *Margarita Philosophica* of 1515, from a misreading of Columbus' first letter, Zoana Mela. This fancy continent grew in size for nearly a quarter of a century, and was hard to get rid of, but the explorations of Ayllon, Cortez, Gomez, Verrazzano, Cartier, and others, finally drove it from our geographies.

In 1513 Florida, up to Chicora, was explored by Ponce de Leon, but it is now certain that it had been discovered two or three years before, probably by private adventurers, but perhaps by Ocampo in his return voyage in 1508. At all events, it appears correctly laid down in the excellent map of Peter Martyr printed at Seville April 11th, 1511, under the designation, *Isla de Beimeni*. This map, exhibiting an unbroken coast line from



Cape Santa Cruz, in Brazil, to the middle of Yucatan, with hints of continental lines from Florida northward and westward, and one due north of Yucatan, if studied by the light of Peter Martyr's tenth book of his second decade, dated December, 1514, will foreshadow an approaching eclipse of Spanish enterprise in this direction.

There is little doubt that, at the time of the publication of this most important map, the author was still under the belief that all these new main lands somehow pertained to the continent of Asia. It is true, he informs us that some philosophers, and he leaves us to infer that he was one of them, had their suspicions that Columbus was mistaken in his opinion of its being Cathay, that the globe was larger than Columbus supposed, and that he had not really reached the antipodes, or the kingdom of the Grand Khan. But when Columbus, in his fourth voyage, brought home some poppinjays, and exhibited their brilliant plumage at the court, the good old gossiping letter-writer acknowledged that the great Discoverer was right, that such beautiful birds could come only from the East. Hence, probably on this map the lines west of Beimeni and north of Yucatan are dream lines from Marco Polo. Indeed, Peter Martyr says, in his first decade, finished in 1510 and printed shortly after, that all these provinces of Paria, Cariena, Canehiet, Cuquibacoa, Uraba, Veragua, and others, are supposed to pertain to the continent of India. Florida and Beimini forgotten by Marco Polo, and left out of his report! Shade of Sebastian Cabot!

In 1511 Cuba was settled under favorable auspices, and with Diego Velasquez as governor over well-to-do colonists, it became the base of operations for extensive explorations. On the 8th of February, 1517, Francisco Hernandez de Cordova, accompanied by Bernal Diaz del Castillo, he of the *True History*, and Antonio Alaminos as pilot, who as a boy had sailed with Columbus, set out on an exploring expedition to the west, to look for trade, gold, and the long-sought passage to the land of promise. He went by Cape Catoche, the bay of Campeche, as far as Champoton, and returned. The next year, 1518, on the 5th of April, Juan de Grijalva set out on the same route, with a better fleet and fuller instructions, accompanied by Bernal Diaz, Pedro de Alvarado, and the ever faithful Palinurus, Alaminos. They

visited Cozumel, Cape Catoche, Campeche, Rio Tabasco, Potonchan, and named the country New Spain. They went as far as Panuco. Alvarado was sent back with the sick and heaps of gold, but Grijalva himself did not return to Cuba till the 15th of November. The journal of this important expedition, kept by the chaplain, Diez, was first published in Italian by Zorzi, at Venice in 1520, as an appendage to the *Itinerario* of Varthema.

Three days after Grijalva's return, Hernando Cortez, on the 18th of November, 1518, with the instructions in his pocket, which the governor sought in vain to recall after the return and favorable report of Alvarado, embarked on that most wonderful expedition of modern history, but he did not really leave Cuba for Cozumel till the 10th of February, 1519. He followed the courses of Cordova and Grijalva till he reached Vera Cruz. From thence he ascended the Grand Plateau, and what followed is known to all the world. In his Second Relation, dated 30th October, 1520, Cortes sent to the Emperor a map of the entire Gulf of Mexico, well laid down, which was printed for the first time in 1524, at Augsburg, where Charles V had resided. This map was incorporated into Orontius Fine's celebrated map of the world dated July, 1531, which, compared with the account of Megellan's voyage, and the third and fourth Relations of Cortes, led the great geographer and astronomer of Nuremberg, Schoner, the next year, 1532, to completely change his mind as to the extent of the South Sea, and place it almost entirely south of the equator, extending Asia to the north of it from the Ganges to Bacalaos, or Newfoundland. On this map of Cortes are the names of all the places at which he touched from Yucatan along the coast as far as Vera Cruz. These are, in order, Santo Anton, Roca Partida, Rio de Grijalva, Rio de la Palma, Rio de dos botas, Caribes, Santo Andres, Rio de Cocuqualquo, Roca partida, Rio de Vanderas, Rio de Alvarado, P. de Sant Juan, Seville, Almera, and San Pedro. The Rio de Cocuqualquo was surveyed for many miles, probably with the hope of finding an opening to the South Sea. In Fine's map of 1531 most of Cortes' names are indiscriminately mixed up with those of Marco Polo. [Pl. III. No. 3 and 4.]

In 1519, Francisco Garay, the Governor of Jamaica, dispatched Alonzo Alvarez de Pineda to explore the keys and coasts of

Florida, but owing to the reefs and contrary winds, he directed his way round by the northwest coast by Mobile Bay, and the Mississippi river to Vera Cruz, thus completing a full and careful survey of the Gulf of Mexico. But still the disappointing report to the home government of old Spain was—no thoroughfare. Here was the eclipse. Portugal had gained a strong foothold of eight hundred miles on the coast of Brazil in consequence of removing the Line westward. In this way Spain became hemmed in between two lines of demarcation, the one the breadth of the Pope, the other the Cordilleras of the new hemisphere, the one about as impassible as the other, to the Spanish mind.

Thus all these three fields of discovery had by degrees crept into one vast continent, extending from the Arctic to the Antarctic Circles, and, instead of being India, the land of fabulous treasures, it was an impassable barrier to the approach thither by the western route. In 1513, when Vespucci had been in his grave a year, and Columbus seven, Nuñez de Balboa first saw the Pacific Ocean (for many years called the South Sea) from the mountain tops of Panama, and soon after navigators began to realize that the land of spices was beyond another ocean, even more vast than the Atlantic itself. The beautiful name AMERICA now began to swallow up the conjunctives, to spread itself eventually all over the new hemisphere, by the same law that made the Libya of the Romans succumb to its younger and more beautifully named daughter, AFRICA.

But Spain, with her new Emperor, her Fonsecas, her Corteses, her Pizarros, her Almagros, her Don Quixotes, her affluent miseries, her newly awakened thirst for gold, her Christian zeal, and her jealous rivalry for possession of the Spiceries, was not the power to bend or break. She redoubled her energies, made laws for the regulation of her half of the world, and pious and unscrupulous as they were, systematized her efforts. She would not permit the Portuguese to seek a passage to their eastern possessions through her half by the way of the Isthmuses of America, and by the same rule she felt a delicacy in using their route by the Cape of Good Hope. Her ambassadors and agents in foreign countries manifested no such scruples.

In 1512 or earlier, Sebastian Cabot was seduced from England, and induced to take service, with his experience, in Spain ; and the same year Juan de Solis, exploring the coast of South America, discovered Rio de la Plata. In 1515 he was again sent thither with a view of finding a passage to the South Sea, and thence to the Moluccas. This expedition returned soon after in consequence of the death of Solis, but it led the way to a successful one in 1519, under Magellan, a disaffected Portuguese gentleman who had served his country for five years in the Indies under Albuquerque, and understood well the secrets of the Eastern trade. In 1517, conjointly with his geographical and astronomical friend, Ruy Falerio, another unrequited Portuguese, he offered his services to the Spanish court, At the same time these two friends proposed not only to prove that the Moluccas were within the Spanish lines of demarcation, but to discover a passage thither different from that used by the Portuguese. Their schemes were listened to, adopted and carried out. The Straits of Magellan were discovered, the broad South Sea was crossed, the Ladrões and the Phillipines were inspected, the Moluccas were passed through, the Cape of Good Hope was doubled on the homeward voyage, and the globe was circumnavigated, all in less than three years, from 1519 to 1522. Magellan lost his life, and only one of his five ships returned to tell the marvelous story. The magnitude of the enterprise was equalled only by the magnitude of the results. The globe for the first time began to assume its true character and size in the minds of men, and the minds of men began soon to grasp and utilize the results of this circumnavigation for the enlargement of trade and commerce, and for the benefit of geography, astronomy, mathematics, and the other sciences. This wonderful story, is it not told in a thousand books ? The Spanish eclipse was now passed, and America not long after stood boldly out as an independent hemisphere.

Meanwhile the Spaniards were timidly tempting their new ocean. The South Sea shores of Darien, Panama, and Veragua were explored in 1515 to 1517, as they had been a few years before on the north side, with a view of finding a water communication from ocean to ocean. Estevan Gomez, another decoyed Portuguese pilot in the service of Spain, who went with Magel-

lan in 1519 as far as the Straits and there discreditably deserted him, returning to Spain in 1521, reported that, though a strait had been found by the admiral, it was too remote and too dangerous for use. It was resolved, therefore, to seek for the supposed isthmian passage by a more thorough examination of the coasts of the Pacific. Accordingly, in 1522, four vessels having been built at Panama, Avila and the pilot Nino set out to explore the coast from the Bay of San Miguel to the Gulf of Fonseca, expecting to find at the latter place a passage by water through to the Gulf of Honduras.

The same year Cortes, after having subjected the mighty barbaric empire of Montezuma, extending from the Atlantic to the Pacific, with characteristic energy set himself to work exploring to find a natural water passage, or to make an artificial one. He ordered four ships to be built at Zacatula, two for direct trade to the Moluccas, and two to search for the strait. The voyage to the Moluccas was postponed, but the search for the strait was prosecuted so vigorously that, between the expeditions of Avila and his own, every inlet was explored between Colima, in latitude  $18\frac{1}{2}^{\circ}$  North, and the Bay of San Miguel, a distance of above 2,500 miles of coast line, but of course without finding any passage. The following year, 1523, Cortes is said to have dispatched five small vessels to reconnoitre the coasts from Florida northward, to seek for the passage connecting the two oceans. His plan was to send another fleet up the western coast that they might meet somewhere north of the German geographer's fancy continent, or sail round it. Of course they never met.

In 1524, Pizarro and Almagro, the future conquerors of Peru, began their approaches thither from Panama, carrying with them always the impossible instructions to seek out the hidden passage, while they were looking for trade and searching for gold.

The Portuguese in India and the Spiceries, as well as at home, now seeing the inevitable conflict approaching, were thoroughly aroused to the importance of maintaining their rights. They openly asserted them, and pronounced this trade with the Moluccas by the Spanish an encroachment on their prior discoveries and possession, as well as a violation of the Papal Compact of 1494, and prepared themselves energetically for defense and of-

fense. On the other hand, the Spaniards as openly declared that Magellan's fleet carried the first Christians to the Moluccas, and by friendly intercourse with the kings of those islands, reduced them to Christian subjection and brought back letters and tribute to Cæsar. Hence these kings and their people came under the protection of Charles V. Besides this, the Spaniards claimed that the Moluccas were within the Spanish half, and were therefore doubly theirs. Accordingly great preparations were made to dispatch a fleet of six new ships to the Moluccas, to establish and protect trade. The Council of the Indies advised the Emperor to maintain this fleet there, and to take the Spiceries into his own hands, and carry on commerce and navigation thither through his own exclusive channels, either by the strait recently discovered by Magellan, or by some hidden one which *must* soon be disclosed (if any reliance could be placed on the geographers) in a more direct line through some one of the Isthmuses; or, failing that, by opening communication from the coast of the Pacific.

Matters thus waxing hot, King John of Portugal begged Charles V to delay dispatching his new fleet until the disputed points could be discussed and settled. Charles, who boasted that he had rather be right than rich, consented, and the ships were staid. These two Christian princes, who owned all the newly discovered and to be discovered parts of the whole world between them by deed of gift of the Pope, agreed to meet in Congress at Badajos by their representatives, to discuss and settle all matters in dispute about the division of their patrimony, and to define and stake out their lands and waters, both parties agreeing to abide by the decision of the Congress.

Accordingly, in the early spring of 1524, up went to this little border town four-and-twenty wise men, or thereabouts, chosen by each prince. They comprised the first judges, lawyers, mathematicians, astronomers, cosmographers, navigators and pilots of the land, among whose names were many honored now as then—such as Fernando Columbus, Sebastian Cabot, Estevan Gomez, Diego Ribero, etc. They were empowered to send for persons and papers, and did in reality have before them pilots, Papal bulls, treaties, royal grants and patents, log books, maps, charts, globes, itineraries, astronomical tables, the fathers of

the church, ancient geographies and modern geographers, navigators with their compasses, quadrants, astrolabes, mathematical instruments, etc. For two months they fenced, cyphered, debated, argued, protested, discussed, grumbled, quarreled and almost fought, yet they could agree upon nothing.

Whereas in the treaty of 1494 the Portuguese claimed the right of placing the line farther west than 370 leagues from the Cape Verde Islands, while the Spaniards contended rather to carry it farther east than placed in the original bull, both parties now (so much does self-interest sometimes modify arguments of right) contended for the very opposite to their former arguments. The line, however, had been fixed on and approved by the Pope in 1494, and therefore could not be altered by them. But as there were 150 miles between the most easterly and most westerly of the Cape Verde Islands, they discussed angrily as to which island the line should pass through, each party knowing that every mile the line was moved here to the east or west, it would necessarily have to be moved just so much at the antipodes, the real field in dispute.

The debates and proceedings of this Congress, as reported by Peter Martyr, Oviedo, and Gomara, are very amusing, but no regular joint decision could be reached, the Portuguese declining to subscribe to the verdict of the Spaniards, inasmuch as it deprived them of the Moluccas. So each party published and proclaimed its own decision, after the Congress broke up in confusion on the last day of May, 1524. It was, however, tacitly understood that the Moluccas fell to Spain, while Brazil, to the extent of two hundred leagues from Cape St Augustine, fell to the Portuguese. The calculation of longitude was the *pons asinorum* of the Congress, the very problem that had deceived Columbus and other experienced navigators a quarter of a century before. At this time let it be remembered, no geographer had given any hint of the fan-like shape of North America, but all maps represent it as a narrow strip of land, like that from Panama to Tehuantepec, with the South Sea, itself narrow, running up to the west of it.

However, much good resulted from this first geographical Congress. The extent and breadth of the Pacific were appreciated, and the influence of the Congress was soon after seen in

the greatly improved maps, globes, and charts. Many doubtful points in geography and navigation were cleared up on both sides of the globe, and the latitude and longitude of many places were defined. Indeed, on the new maps after this, all the discoveries actually made, up to 1524, were tolerably well laid down, but there was a deal of imposition left in the imaginary lines of those parts of the North American coast which had not yet been explored, that is, between Florida and Nova Scotia. These false lines were still used by the pilots of both Spain and Portugal, probably with a view of blinding the eyes of each other, or leading astray the outside barbarians of England, France, and Holland, who, though children of the Father, and given to trade and adventure, had no share in the Papal gratuity. The fact that all the coasts of South America, Panama, Nicaragua, Honduras, Yucatan, the Gulf of Mexico, and Florida, as well as of the Pacific shores from the Gulf of San Miguel to Colima, that had been surveyed by the Spaniards up to this time, were well laid down, both as to latitude and longitude, proves almost to a certainty that the indefinite coast line of the United States was still imaginary, if not Asiatic. Indeed, the old wood-cut maps of 1513 and 1522 of the German geographers, with their ideal continent, Terra de Cuba, did service, without alteration in the Ptolemies, for a quarter of a century later.

The return of Magellan's ship *Victoria* in 1522 aroused the spirit of public and private enterprise throughout Spain. Innumerable schemes for developing commerce with the Orient, and making further explorations, were proposed and discussed. Every pilot, whether amateur or practical, had his card of the shortest route to the Indies. Of these schemes no less than six in 1523 and 1524 were adopted by the government, and promoted wholly or in part by public funds; viz., that of Cortes, of Loaysa, of Gomez, of Ayllon, of Cabot, and of Saavedra. The impending conflict with Portugal called together the Congress of Badajos. That being over by the 1st of June, 1524, and resulting practically in favor of Spain, these several plans were matured as fast as practicable.

Cortes, the first and most active, had no sooner conquered Mexico and clenched his conquest than he began his exploration of the coasts of the Pacific. Without delay he sent



Alvarado and other captains to the south and southeast, to bring into subjection the chiefs of the Province of Oaxaca and what is now called the Isthmus of Tehuantepec, and, shortly after, proceeded thither himself.

Ships were built on the Pacific side, but with many of the materials carted over from the Coatzacoalcos River. All the details of this scheme, from the 15th of May, 1522, to the 15th of October, 1524, are recorded in Cortes' Fourth Relation to the Emperor, printed at Toledo, October 20th, 1525. This Relation in Spain, with the reports of Alvarado and Godoy attached, gave still another impulse to the new speculations and enterprises, as it showed not only the practicability, but the probability of opening by artificial means a direct route to the Orient in a low latitude and good climate. Cortes was clear-headed and far-sighted enough to see that lines of commerce must be straight lines, and that the curves of the capes in high latitudes are only temporary matters of necessity. Indeed, so sanguine was Cortes on these points, that he planted his personal hopes and private fortune on and near this isthmus, as likely to become the Old World's highway for Oriental commerce. All the lands and private estates selected for himself and his posterity, and confirmed to him in 1529 by the Emperor, were located here in the Valley of Oaxaca, and near Tehuantepec. He was ennobled in 1529, taking his title, Marquis del Valle, from his possessions chosen here. To this day they are called the Cortes Estates, or the Marquisanas. He and his kinsman, Saavedra, had vast schemes for opening communication, by means of a ship canal or Roman road, for the transportation of merchandise brought hither from the Moluccas and other parts of the East for passage or transhipment to Spain. How unexpectedly this rational scheme was thwarted will appear farther on.

At the end of 1524 or early in 1525, Estevan Gomez, the pilot who had been in the East, had started with Magellan and deserted him, a delegate to the Congress of Badajos, was the first to get off from Spain. He had boasted that he could find a passage to Cathay and the Spice Islands by the north, as Magellan had done by the south. He must have seen at Badajos, if not before, the maps of Ruysch, with the continent west of

Spagnola extending to  $35^{\circ}$  north, and the Hylacomylus map of 1513, carrying the same ideal continent up to lat.  $46^{\circ}$ , ending with Cape Mar del Oceano, just above Ruysch's Cape Helicon (probably named from the rumored fountains of Florida). Peter Martyr's map of 1511, and Cortes' map of 1520, printed in March, 1524, together with the knowledge that Ponce de Leon, in 1513, and Ayllon, in 1520, had explored the coast of Florida up to  $33^{\circ} 40'$ , a little above Charleston; and it being known that Ayllon had another commission in his pocket, dated June 12, 1523, to explore still further north of Florida; and his own commission being to find a strait between Florida and Barcalaos; these considerations make it certain that Gomez' field of search lay between  $35^{\circ}$  and  $45^{\circ}$ , or between Norfolk and Cape Sable, where, as Peter Martyr expresses it, "he found pleasant and profitable countries agreeable with our parallels." Very little is known about this unimportant expedition, and no authentic maps or papers have come down to us. The contemporary historians give no prominence to it, and very few facts about it. Indeed from what is at present known, it is very difficult to tell whether Gomez sailed up or down the coast, or both, or at what points he touched. So little information did he bring back, that it would not now be a matter worth discussing if the results of the voyage had not been so enormously exaggerated by recent writers.

Let it be borne in mind that Gomez sailed with only a single caravel of fifty tons, with perhaps a dozen men, in the dead of winter, from Coruna, in lat.  $43^{\circ}$ , the government contribution toward the cost of the fit-out being only 750 ducats, returning in November, 1525, after an absence of about ten months, with some Indian slaves, whom he had kidnapped against a recent law of Spain and the positive instructions of the Emperor, and you have the whole story. Oviedo, writing in 1526, says that he sailed to the northern parts and found a great part of land continue from that which is called Bacalaos, taking his course toward the west to  $40^{\circ}$  and  $41^{\circ}$ , from whence he brought certain Indians. Would an intelligent pilot sail north with such a craft in winter? Might not New England be the "great part" of land next to Bacalaos; and might not the fine tall natives of Rhode Island have been kidnapped, part being taken to

Cuba for sale, the rest taken to Toledo, thus consuming the ten months, without having gone north of Cape Cod? Peter Martyr says, writing also in 1526: "He, neither finding the strait nor Cathay, which he promised, returned back within ten months from his departure. I always thought and presupposed this good man's imaginations were vain and frivolous." Herrera, who wrote three quarters of a century later, is hardly more favorable to this explorer.

The reader is referred, by recent writers, to the manuscript map of Ribero of 1529, now preserved at Weimar, for the result of Gomez' voyage. But the intelligent reader will see with half an eye that this is a partizan map, and intentionally deceptive in the coast line between  $33^{\circ} 40'$  and  $50^{\circ}$  N. The discoveries of the English are thrown into Greenland, and called Labrador, while Bacalaos is given to the Portuguese, and cut off by the line of demarcation. All the rest of the coast is closed up under the names of Gomez and Ayllon, and so given to Spain. There is no room left for the discoveries of Verazano for the French in 1524. The Spaniards knew of his voyages, for they had been watching him, and caught him, and in 1527 hanged him as a corsair. Indeed, the best that can be reasonably said of the voyage of Gomez is, that it exploded the ideal continent of the German geographers, and, connecting the explorations of Ayllon with New England, showed that the coast of North America trended continually eastward, so as probably to connect it with the discoveries of the Cabots, and thus make the whole coast west of the Line Spanish.

Lucas Vasquez Ayllon, a lawyer, a Senator in Hispaniola, and a man of position, immediately after the survey of the entire Gulf of Mexico under Grijalva and Cortes, sent an expedition up the coast of Florida in 1520, as far as Chicora, exploring beyond the limit of Ponce de Leon, as far, probably, as Cape Fear, seeking for the passage to Cathay. He found a fine country, but to Asia no thoroughfare. The next year he returned to Spain, and was, according to Peter Martyr, in behalf of the Regency of Hispaniola "a long time suitor [to the Council of the Indies] to have leave to depart again into those countries, to build a colony there." At length, after the return of Magellan's ship *Victoria* with its glorious news, the Council

granted his request, and articles of agreement were signed the 12th of June, 1523, giving him permission, at his own expense, to fit out as many vessels as he pleased for the purpose of planting his proposed colony, but the usual instructions were inserted in his grant, to explore all inlets and islands with a view of finding a passage to Cathay. This license, given by Navarrete, permitted him to explore as far as 800 leagues to the north of Hispaniola. He returned to Hispaniola, built there six fine vessels, and, after many delays, sailed with them and above 500 men and nearly 100 horses, in July, 1526. He went as far north as lat.  $33^{\circ} 40'$ , found no strait, and met with nothing but misfortunes. The 18th of October Ayllon died, and soon after the few survivors, about 150 out of the 500, returned to Hispaniola, the expedition being a dead failure. Thus ended the attempt to plant a colony near the mouth of Cape Fear River, and thus ended the Spanish attempts to penetrate to the East by the way of the North. Both Gomez and Ayllon had found no gold, and no strait, and even the trees and animals they reported were common in Europe; whereat old Martyr exclaims, "to the south! to the south! for the great and exceeding riches of the equinoxial; they that seek riches must not go unto the cold and frozen north." The whole story is comprehended in Martyr's sentence. North America, by the Spaniards, was never considered of any consequence of itself, and was regarded only as a barrier or a stepping stone to a richer, older and better land. It was necessary, however, to shut it up by a coast line west of the line of demarcation, so that other nations might be deterred from finding a northern passage to India.

The Emperor, considering the verdict of the Congress of Badajos in his favor, lost no time in dispatching his new fleet of six sail and 450 men by the Straits of Magellan, from Coruna, on the 24th of July, 1525, under the command of Loaysa, to the Moluccas and the Spice Islands, with the view, first, to succor the men left there by Magellan's fleet, and then to establish a government bureau and to protect its commerce. The Straits were passed, and four of the six ships reached the Moluccas; but the story of their long, long sufferings is too long to be told here.

In April, 1526, Sebastian Cabot, who had for years been the

Pilot Major of Spain—said, however, to have been a better cosmographer than pilot—after long and ample preparations at Seville, sailed for the Moluccas via the Straits of Magellan, with four well-equipped ships, for the purpose of reinforcing and assisting the expedition of Loaysa. This expedition was another dead failure. For some unaccountable reason, Cabot did not deem it prudent to try the Straits of Magellan, but attempted to find a passage through the Rio de la Plata. He penetrated far into the interior of Paraguay, explored many large rivers and fertile provinces, suffered many hardships, lost most of his men and ships, and finally, after four years of toil and disappointment, returned without any favorable results.

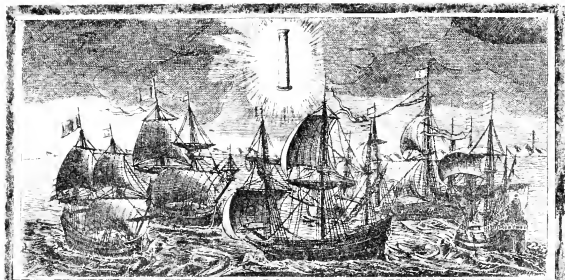
Cortes was kept informed of these several expeditions, with a request from the Emperor that he would coöperate with them at the Moluccas, by sending a fleet from the western coast of Mexico. Accordingly he caused three ships to be built on the Pacific, and dispatched them, with 110 men and thirty pieces of artillery, under command of his kinsman, Saavedra, from some port of Southern Mexico, probably Tehuantepec, Huatulco, or Acapulco, on the 31st of October, 1527. This fleet met that of Loaysa in the Moluccas, coöperated with it, found the Portuguese strong and resolute, by no means disposed to abandon the islands, fought them separately, and fought them together for months, nay, for years, never hearing a word from home, being cruelly neglected, yet loyal and true, till reduced to a handful, some few of the survivors, long after Loaysa and Saavedra had died, as well as most of the sub-officers, found their way home after twelve years of unspeakable hardships. Thus all these six hopeful expeditions brought nothing but disappointment. The Straits of Magellan were found so dangerous and remote, that old Peter, had he lived, would no doubt have again exclaimed as before, "To the north! to the north! they that seek riches must not go to the dangerous and frozen south!"

As early as 1526 or 1527, before the extent of these failures was known, it became apparent, if the commerce of the East was to flourish, it must be by some more direct communication. These great difficulties of the extreme North and South determined the Spaniards to explore the Isthmuses yet more thoroughly. All the five routes from Darien to Tehuantepec, were

spoken of then as now, with the view of constructing immediately a canal, road, or portage, deeming it safer and cheaper to tranship goods, than to carry them round by the Strait. "There are mountains it is true," exclaimed the old historian, "but Spanish hands, and Spanish enterprise can overcome them." But no Spanish hands could overcome the impolitic blunders of the Emperor. There is little doubt that inter-oceanic communication would have been opened in 1529 or 1530, by means of a ship canal or a turnpike across the Isthmus of Tehuantepec, had not the Emperor, who was greatly in want of money, defeated all the schemes against the advice of the Council of the Indies, by pawning in the treaty of Saragossa to the King of Portugal who had just married his sister, the Moluccas for 350,000 ducats. So the trade of the Moluccas passing for a time out of the hands of the Spaniards, there was no immediate pressure for the completion of this great work. The opportunity then lost of securing an exclusive transit was never recovered by Spain, but it is reserved to us of to-day to make the Isthmus of Tehuantepec the world's highway.

H. S.

May 10, 1869.



# HISTORICAL AND GEOGRAPHICAL NOTES

1453—1530



By HENRY STEVENS GMB FSA MA Vale etc  
Fellow of the Royal Geog & Zoological Societies of London  
Foreign Member of the Amer Antiq Society Corresp Member  
of Ge Historical Societies of Mass New York Connecticut  
Maine Vermont New Jersey Pennsylvania Wisconsin  
and Blk Bld Athm Clb Lond

NEW HAVEN: Office of the American Journal of Science  
LONDON: Office of the Author No 4 Trafalgar Square 1869



Congress of Badajos.





## LIST OF MAPS AND CHARTS



### PLATE I

CHART OF THE WORLD by JUAN DE LA COSA, dated 1500, the western third, reduced from M. Jolyard's uncolored fac-simile. The original is in the Royal library, Madrid, on leather, colored, size 5 feet 10, by 3 feet 2 inches, described in the preceding pages. Humboldt and Lelewel differ as to the continuation of La Cosa's coast line of Eastern Asia, cut off a little beyond the Ganges, the former supposing that La Cosa intended to be continued as the Western coast of the new hemisphere, while the latter thinks it was intended to be continued in the coast line of Brasil.

### PLATE II

Nº 1 OCEANUS OCCIDENTALIS SEU TERRÆ NOVÆ, reduced from the Ptolemy of 1513, printed at Strasburg in folio.

Nº 2 LA CARTA UNIVERSALE DELLA TERRA FERMA & Isole delle Indie occidentali, cavata da due carte da nauticare fatte in Sibiha da li piloti della Maiesta Cesarea. Venetia, 1534 Reduced to one quarter the size of the unique original in the possession of Mr James Lenox of New York. The two pilots are (on doubt Fernando Columbus and Diego Ribero whose original charts of 1527 and 1529, or contemporary copies, are preserved in the military library at Weimar. the American portions of which have been extracted and published by Dr John G. Kohl of Bremen.

Nº 3 Part of the UNIVERSALIOR COGNITI ORBIS TABULA by John Ruysch. Published in the Ptolemy of 1508, printed at Rome, in folio. See *supra* pages 13 and 32.

### PLATE III

Nº 1 MAP OF THE NEW HEMISPHERE by F. G. Size of the original, dedicated to Hakluyt, and issued in his edition of Peter Martyr's Eight Decades, Paris. 1587, 8vo. It is very rare. Cabot's discoveries are placed north of the Gulf of St Lawrence and dated 1496. Virginia is here laid down for the first time, and dated 1584. Drake's landing in California is recorded under the date of 1580, and the territory assigned to the English. Frobisher's discoveries are dated 1576, and given to the English.

Nº 2 HONTER'S GLOBE dated 1542, three continents terminating alike in the Southern Ocean. *Paria* takes the place of *Terra de Cuba* and is separated from *Zipangu* by a narrow sea. America is confined to South America which is represented as a large island.

Nº 3 ORONTIUS FINE'S DOUBLE-HEARTED GLOBE dated July, 1531, slightly reduced from the original in the Paris edition of the *Novus Orbis* of 1532.

N<sup>o</sup> 4 Part of the above mentioned GLOBE of ORONTIUS FINE of July, 1531, reduced to Mercator's Projection. The best authorities seem to have been used by Fine in compiling this map, but he has so misread them that his production is the culmination of absurdities. Yet the best geographers and mathematicians of his day agree with him. Schoner's *Opusculum Geographicum*, 4<sup>o</sup>, 1532, though intended as a description of his own new and improved globes made at Nuremberg, answers equally well for the descriptive text of this map. The names of places used by Marco Polo in Eastern Asia, and those given by Cortes in Mexico, are mixed up and all laid down in one country which is called farthest India. For this admirable reduction to Mercator's Projection the writer is indebted to his friend Mr. J. C. Brevoort, of Brooklyn, who on all occasions has liberally opened to the writer his geographical treasures to use as freely as if they were his own.

#### PLATE IV

N<sup>o</sup> 1 Extract from the very large MAPA MUNDI OF SEBASTIAN CABOT of 1544, showing the Gulf of St. Lawrence, Newfoundland, Labrador, Nova Scotia, &c. From M. Jomard's facsimile of the original in the Imperial Library of Paris, the only copy at present known to exist reproduced by photo-lithography, and consequently a correct copy. The reader is invited to compare this extract with a similar one lately published by Mr J. F. NICHOLS, City Librarian of Bristol in his well printed *Life and Discoveries of Sebastian Cabot*. Out of about 65 names Mr Nichols' engraver has managed to misspell above 40 of them, some of them becoming hopelessly disguised, as *f, i, 'Cupo de arause'* which means nothing, instead of *capo de arecife* which does have a meaning. It is suspected that Mr Nichols' copyists and printer have fallen into similar errors with regard to the text of his book, and that consequently Sebastian Cabot is elevated into a position at the expense of his father, and historical truth, which cannot be sustained, without some sort of trustworthy evidence.

N<sup>o</sup> 2 Western portion of the TYPUS UNIVERSALIS TERRE in Reisch's MARGARITA PHILOSOPHICA of 1515, evidently copied from the Ptolomy of 1513 with the Ganges left out, and *Zoana Mela* put in. At this period, and for some time after, it was the general opinion of the German Geographers, that whatever parts of the world were not included in Europe or Africa somehow pertained to Asia. The terms *Novus Orbis* and *Mundus Novus* were very early applied to the new discoveries. As early as August, 1495, Peter Martyr wrote *de orbe novo* of Cuba believing it on the authority of a letter from Columbus himself, to be a part of Asia, just as more than a thousand years before the Romans called England the new world because it was then as another world to them beyond Cadiz. Ovid to Livia honors Germany with the title of *New World*.

Et penitus toto divisos orbe Britannas.—*Virgil*.

Serves iterum Caesarem in ultimos

Orbis Britannos.—*Horace*.

The fact therefore that Giocondi, in translating Vespucci's account of his third voyage, called the newly described country, *Mundus Novus* does not prove that by him in 1504, Brasil was thought to be a new continent independent of Asia.

N<sup>o</sup> 3 THE NEW HEMISPHERE, reduced from Ramusio of 1556, almost the whole of it laid down from good authorities except the Atlantic coast line of North America, the Asiatic features of which are not eradicated. Terra del Fuego

is represented as a Southern Continent. The latest Spanish explorations in California are carried up to lat.  $40^{\circ}$  N. and the coast of Labrador extends to  $67\frac{1}{2}^{\circ}$ .

N<sup>o</sup> 4 Part of SEBASTIAN MUENSTR'S MAP OF THE WORLD from the *Novus Orbis* of Grynaeus, Basil, 1532. Muenster in this map, as well as in his printed description of it, was much behind the times. The map is of the school of Bernard Sylvanus 1511, of Gregory Reisch 1515, of Apian 1520, and Laurence Fries of 1522. There is no trace of Peter Martyr's map published in 1511, or that of Cortes printed in 1524, nor had Magellan disturbed his conservatism. The discoveries of the Cabots and the Cortereals are represented as an island and called Terra Cortesia. The German geographers' fancy continent, *Terra de Cuba* extends due north and south, nearly ten degrees wide, from lat.  $10^{\circ}$  to  $48^{\circ}$  N. with Columbus' Gulf of Ganges to the west of Spagnola. America is still confined to South America, of which Parias and Prisilia are provinces.

N<sup>o</sup> 5 PETER MARTYR'S MAP of the discoveries of Columbus, Vespucci and others, made in 1510, and published in his *First Decade*, April 11, 1511, reduced from the very rare original which belonged to the writer in 1845, but is now in the possession of Mr John Carter Brown of Providence. This is by far the most authentic, accurate and important printed map of the coasts from Cape St Roque to Honduras, including Columbus' Archipelago, that has come down to us, of all those known printed prior to 1534.

N<sup>o</sup> 6 THE WORLD enlarged from Porcacchi of 1576. The Province of Anian is in Eastern Asia, and Labrador occupies all New England and beyond is Florida. The lakes are represented by one large one, some 600 miles long. In Canada, divided by a river flowing southeast into the Atlantic, in latitude  $41^{\circ}$ . This will do for the Hudson river. In separating Asia from America, several of the Asiatic Provinces are set off to California. The Southern Continent has grown to an enormous extent.

N<sup>o</sup> 7 CORTES' CHART OF THE GULF OF MEXICO sent to Charles V in 1520, and printed at Augsburg in 1524. Size of the original in the possession of Mr James Lenox. This and Peter Martyr's Map are incorporated bodily into Laurence Fine's map of 1531, and laid down with Marco Polo's as part of Eastern Asia.

#### PLATE V

Part of a PORTUGUESE PORTOLANO, not dated, but circa 1514 (?) extracted from Kuntzman's fac-simile of the original at Munich. A very important chart, but manifestly not well understood by the several writers who have described it. Among the flags, Spanish, English and Portuguese, set up to mark the nationalities of the several possessions there are two *Mohammedan* ones showing incontestably that the compiler of the chart supposed these countries to belong to Asia. One is in Nicaragua and the other in Venezuela. Cuba is represented as an island, and thrown down to its proper latitude, while Honduras like Peter Martyr's is carried too high. Dr. Kohl has misled many by putting on his reduced fac-simile the name of Yucatan, which is not on the original. There are indications of the discovery of the South Sea in 1513, in the short coast line south of Darien and in the two canoes of Indians. But this part of the chart is evidently an after thought, for there are indications of names being cut out or curtailed to make room for the new discoveries, which circumstance, together

with the name *Tera Bimini*, instead of Florida, tends to show that the original map was made before the expeditions of Balboa and Ponce de Leon in 1513. Indeed by leaving honestly open the undiscovered coast between Bacalaos west of the line of demarcation, and Tera Bimini, the map clearly resembles that of Bernard Sylvanus with his *Regulus domus* in the Venetian Ptolemy of 1511.

#### PLATE VI.

TEHUANTEPEC RAILWAY COMPANY'S Chart of the World on Mercator's Projection: showing the lines of railway with its connections of steamships and sailing vessels, with the prominent parts of the world as they are this year, 1869.

#### CONCLUSION.

All these things disjointed and crammed as they are in this little book, to the indifferent reader will no doubt seem very simple, inasmuch that some will think that they have known them all along. But simple as they are if credited and adopted, they will require a careful revision of our whole course of study in early American geography and history.

Τέλος, LAUS DEO.





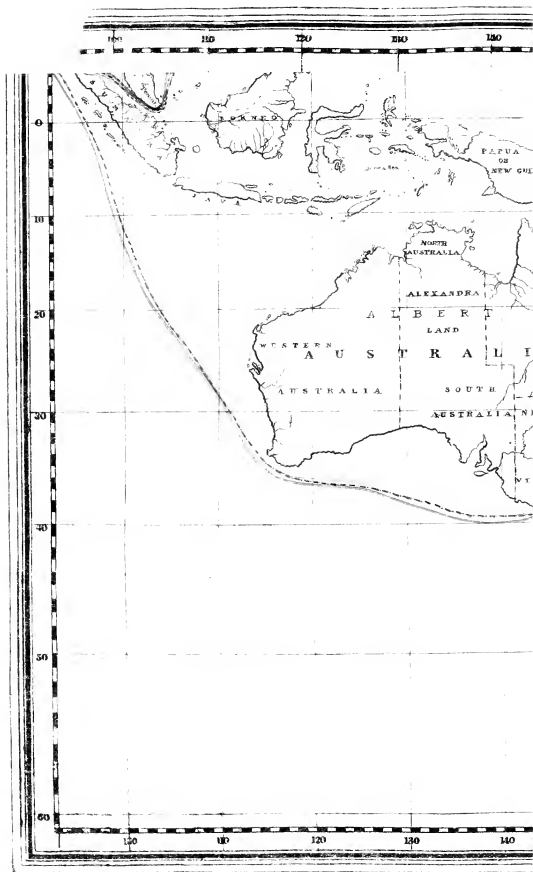






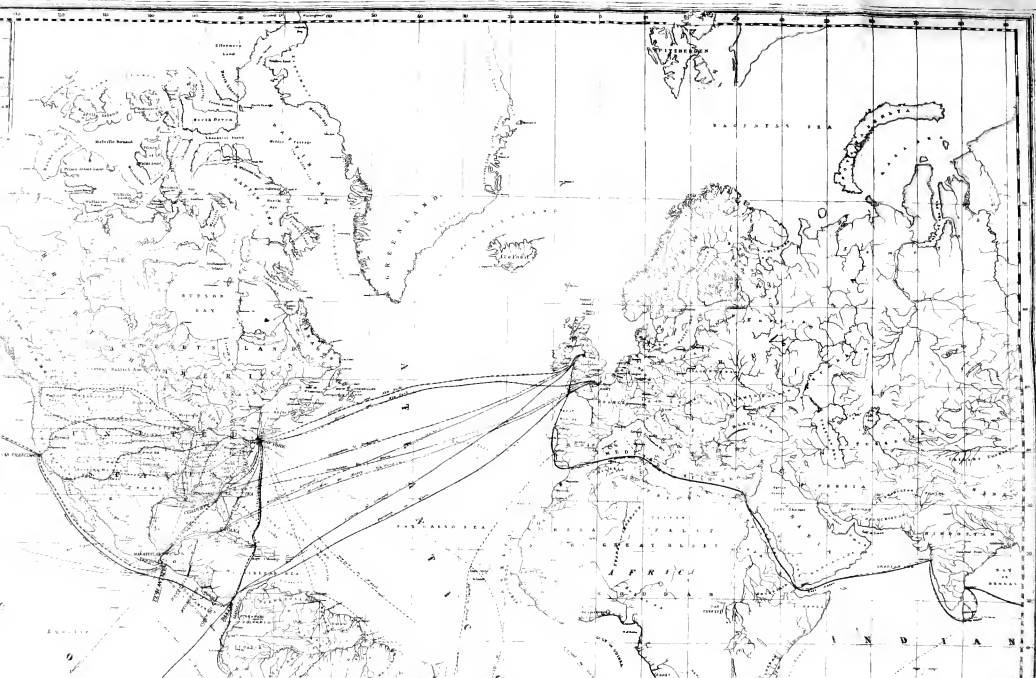






Entered according to act of Congress in the year 1868 by the Tehuantepec Railway Co. in

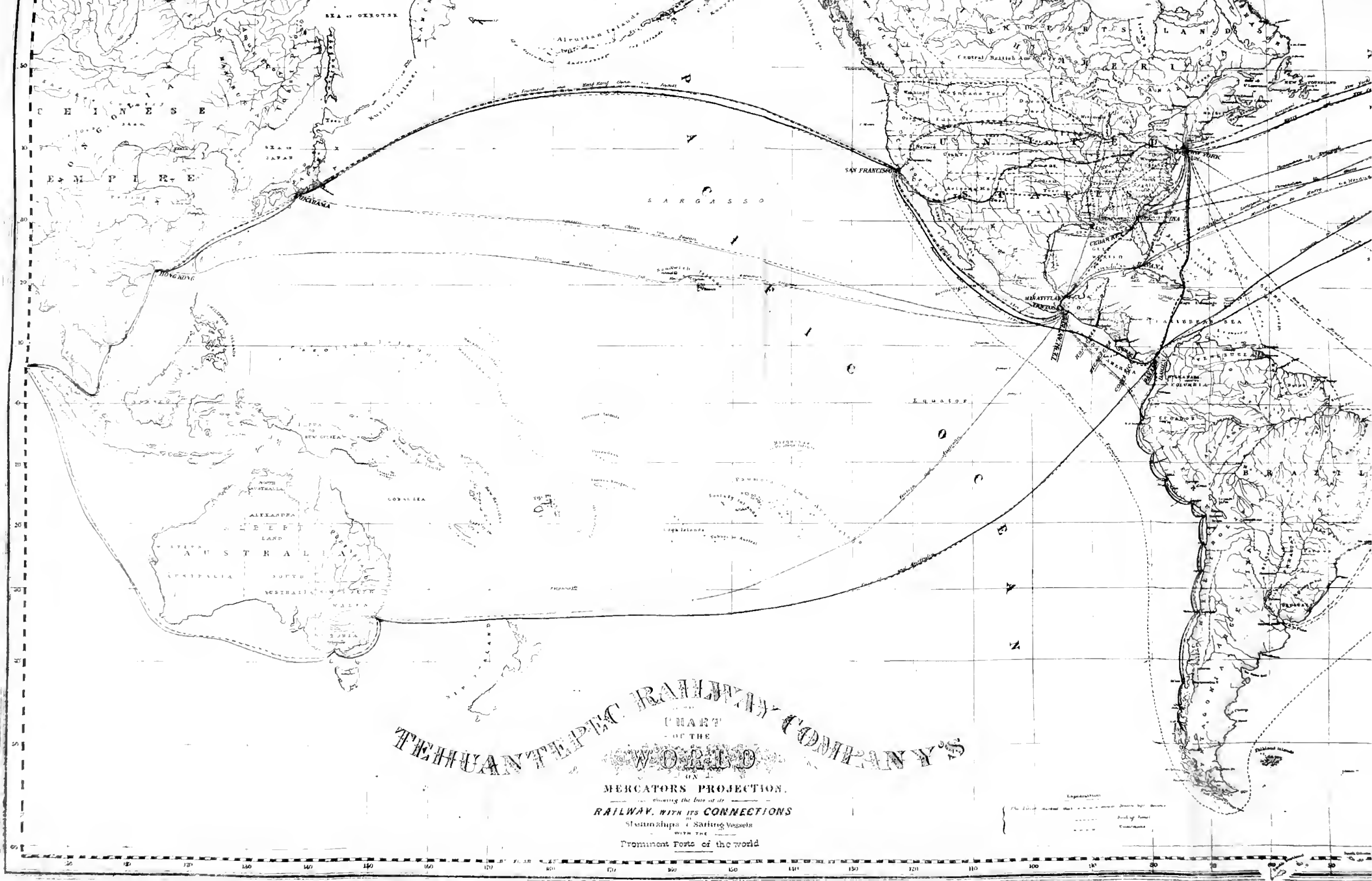


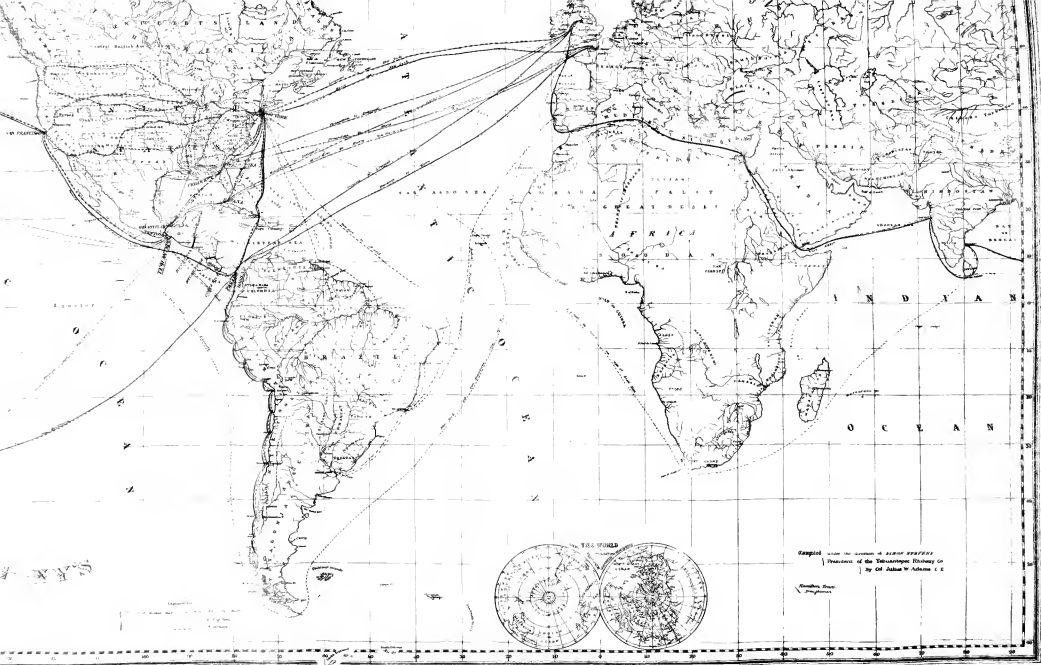


# TEHUANTEPEC RAILWAY COMPANY'S

## CHART OF THE WORLD

MERCATORS PROJECTION.  
 Showing the line of its  
**RAILWAY, WITH ITS CONNECTIONS**  
 Steamships & Sailing Vessels  
 WITH THE  
 Prominent Ports of the world





Compiled under the direction of **ALBERT BRADSHAW**  
 President of the Telegraphic Railway Co.  
 by **CHAS. W. ADAMS, C. E.**

Copyright, 1891,  
 by **ALBERT BRADSHAW**

